

INSIDE DOPE

by GEORGE F. TAUBENECK

The Public Is Angry
Chaotic Conditions Beyond
Imagination
Flows Like Music
He Is Your President
Change the Rules
Tired of Politicians

The Public Is Angry

That the American people are sore as hell at labor union arrogance is evident from the tone of the letters which continue to arrive here in every mail in response to that front-page editorial, "What's the Matter with America."

We'll let these letter-writers speak for themselves:

Chaotic Conditions Beyond
ImaginationWilson Cabinet Co., Inc.
Smyrna, Dela.

Editor:

I just want to compliment you on your article in the May 27 issue of the AIR CONDITIONING & REFRIGERATION NEWS entitled "What's the Matter with America?" I heartily agree with everything you said and wish that your article could be broadcast throughout the United States and particularly in every Congressman's office in Washington, D. C.

Have you heard of the Tool Owners Union, located at 1802 Massachusetts Ave., Lexington 73, Mass. I am in hopes that this movement may be our answer in fighting unions. If unions are the order of the day, let's all join the Tool Owners Union and fight on an equal basis.

In the event you have not heard of this movement, there was an article on Page 74 and Page 75 of the June 17 issue of News Week. I believe there is an advertisement in the Cleveland Plain Dealer on Monday, June 17. I am sorry that I don't have extra copies of their advertisement to send you.

I understand that you can supply reprints of your article, and I am wondering if you would send us about 250, billing us for any cost. I would like to distribute them throughout our organization and to send them to several friends. Please keep up the good work. We need men of your calibre to correct the most chaotic conditions that have ever existed and are beyond any imagination.

J. E. WILSON, JR.,
President

Flows Like Music

U. S. Motors
2033 Park Ave.
Detroit 26, Mich.

Editor:

I've just finished reading your editorial "What's the Matter with America?" and brother, I think you've said it.

You've not only said it like nobody else dared, but at the same time you've turned out a literary masterpiece. As one of my associates remarked, "It flows along like music."

Superlatives being superfluous in this case, I just want you to know that all of us at U. S. Motors agree that it's a beautiful hunk of writing.

NORMAN E. COLTON

He Is Your President

Hussmann Refrigeration, Inc.
2401 N. Leffingwell
St. Louis 6, Mo.

To All Hussmann Distributors:

We urge each of you to read the editorial by George F. Taubeneck in AIR CONDITIONING & REFRIGERATION NEWS, issue of May 27, 1946, entitled "What's the Matter with America?"

(Concluded on Page 11, Column 1)

CONDITIONING AND
REFRIGERATION

PUBLIC LIBRARY

JULY 1, 1946
Issued Every Monday at
450 W. Fort St., Detroit 26, Mich.JULY 1,
1946Vol. 48, No. 9, Serial No. 902
Established 1926.Chicago Furniture
Mart Attendance
May Hit 35,000

CHICAGO—The summer Furniture Mart scheduled for July 8-20, second of the two great appliance, furniture, and furnishings inventories held each year in Chicago, promises to repeat January's performance and hit another all-time high.

January's register ran up over 24,000 to establish a new record. This time the men behind the show, which is held in the Merchandise Mart and American Furniture Mart buildings, are planning to receive 35,000 people.

True, there won't be many appliances to buy. Production is still limited, and most electrical appliances are still on an allocation basis. And most of the manufacturers will have to remain on a quota basis for months to come.

But all of them will be working to give their dealers all the cooperation they can, and to establish goodwill with hundreds of potential dealerships that will give them outlets to the growing market—as soon as limitations are lifted and production can highball ahead.

You can expect the exhibits to (Concluded on Page 28, Column 4)

Prices Announced on
2 Philco Freezers

PHILADELPHIA—New prices on its 2 1/2 ft. and 5 ft. freezers have recently been announced by Philco Corp. The smaller model AH25 will sell for \$149.50 and the larger for \$199.50.

Both freezers have a plastic lid liner as well as a counter-balanced lid stay to hold it open automatically. With the lid down the freezer is safeguarded against tampering by a built-in lock and latch. The hermetically sealed refrigerating system is capable of producing temperatures as low as -25° F., the company claims. An automatic alarm warns the user in case of a failure in electric power.

A special feature of the 5 ft. freezer are three compartments that can be used either for food freezing or for storing frozen food.

Volume production of both models is already under way, company officials declare.

ASHVE Picks Cleveland
For Next Annual Meet

CLEVELAND—Next annual meeting of the American Society of Heating & Ventilating Engineers, the society's fifty-third, will be held here Jan. 27-30 during the annual Heating & Ventilating Exposition.

Hupp To Concentrate
On 'Contract Mfg.'

DETROIT—The Hupp Corp., formerly the Hupp Motor Car Co. has abandoned automobile manufacturing to concentrate on "contract manufacturing" for the refrigeration and other basic industries, according to R. S. Geddes, president.

The firm, operating plants here and in Cleveland, is making parts, sub-assemblies, assemblies, and some finished products for the refrigeration, radio, farm implement, automobile, and truck industries.

William S. Knudsen, former president of General Motors and recently elected Hupp director, declared, "Hupp is engaged in contract manufacturing, which is a method of operation that has been well proven in recent years."

Industry Awaits
Effect of Steel
Priority Order

DETROIT—Manufacturers of refrigeration, appliance, and air conditioning products last week were "sweating out" the effects on their steel supply of Direction 12 to Preference Order M-21.

This Direction 12 grants priorities on various types of steel to manufacturers of farm machinery and residential equipment such as bathtubs, furnaces, and prefabricated housing units.

The Direction permits manufacturers of such equipment to "certify" any orders that they have with a steel producer or a steel warehouse, and such certification means that these orders take priorities, and must be filled before others.

Steel producers last week were unable to predict just how badly the normal sequence of their orders would be disturbed by such certification.

However, an official of one major appliance manufacturer declared that Direction 12 "might hurt us like the very devil."

Types of steel covered by Direction 12 include plates, sheet and strip, steel castings and forgings, and steel tubing, and others.

Some steel producers were said to be considering deferring orders that might be displaced by the injection of certified tonnage for the preferred requirements.

1,000 Refrigerators
Per Day Reached
By Westinghouse

PITTSBURGH—Production of refrigerators at Westinghouse Electric Corp. has reached 1,000 a day—about 50% of the prewar rate, according to Gwilym A. Price, president.

The electric appliance division's daily output of electric irons and roasters has now topped 3,000 units, which is better than prewar production, and thousands of electric ranges which were partially assembled before the four-month strike are being taken from storage, fitted with heating elements, and shipped to distributors, he said.

Production of fractional horsepower motors at the Westinghouse plant in Lima, Ohio, has topped prewar levels, also, current rate being 18% over the 1941 average.

In the first five months of the year the company received \$192 million in orders, and the backlog of unfilled orders at the end of May totaled \$442 million.

"We are making good progress in converting this backlog into sales billed, and we are regaining some of the ground lost during the recent four-month shutdown due to a strike," said Mr. Price.

Provided materials do not prove a stumbling block, Westinghouse expects the output of appliances now in production will substantially exceed the full prewar production rate by the end of the year, declared Mr. Price.

Both the capacity and range of appliance production should be greatly increased before next year as the result of the \$12 million expansion program at the Mansfield, Ohio, and East Springfield, Mass., appliance plants, it was indicated.

At East Pittsburgh production in the Westinghouse plants of such equipment as generators, large motors, and circuit breakers has attained 90% of the production rate planned before the strike, despite shortages of steel and copper. Employment at these plants now totals 27,000 as compared with 25,870 at the end of 1945.

New Price Law Restores Margins;
Controls End on Coils, Beer UnitsSuspension Order on
'Coils For Cooling Use,
Beer Coolers' Announced

WASHINGTON, D. C.—OPA has announced, effective June 26, the suspension of the following products from all price control:

Beer cooling and dispensing equipment.

Coils and fan coils designed for cooling purposes.

Insulated cold storage doors.

The suspension of price control on these items was taken through the addition of a new section, 10(b) (6) to OPA Supplementary Order 129.

"This suspension order ends price control on these items at all levels of the trade," declared John M. Buckley of the OPA headquarters here.

This means that distributors and dealers may establish new prices on such of these items as they may now have in stock.

It is well known in the industry that an order suspending practically all commercial refrigeration equipment except condensing units under 1 hp. has been "in the works" at OPA for more than a month.

However, issuance of the order has been delayed on several occasions and it is suspected that it may now be held up to see what the general effect of OPA may be.

While this proposed suspension order is supposed to cover all types of refrigerators except household, it is understood that home and farm freezers may be eliminated when and if the suspension order issues.

It may or may not be significant that in the statement of considerations for the part of Order 129 which suspended price control on beer coolers and cooling coils, it was stated:

"The suspension does not include cabinets for frozen foods, ice making and ice cream or hardening cabinets for ice cream."

Dallas Blast Cause
Still Undetermined

DALLAS, Tex.—Exact cause of the blast in the basement of the Baker hotel here which killed eight hotel workers, injured 38, and rocked the downtown business section has not been determined, declared Fire Marshal B. C. Hilton, who is directing an investigation. Some early, unauthentic press and radio reports had suggested that refrigeration equipment had been a cause.

"All we know now is that an undetermined type of gas probably started the explosion. We may never know exactly what happened," he said.

The explosion occurred Friday, June 21, in the basement where new ammonia refrigerating machinery of direct expansion and brine types was being installed. Following the blast fog-like gusts of ammonia

(Concluded on Page 4, Column 5)

U.S. Airco Moves into
New Minneapolis Plant

MINNEAPOLIS—United States Air Conditioning Corp. is now operating from its recently purchased plant at 33rd St. and Como Ave. S.E. here. The new building provides approximately 100,000 sq. ft. of manufacturing and office space.

USAIRco designs and manufactures a complete line of air conditioning equipment, blowers, fans, air washers, cooling and heating coils, humidifying and dehumidifying equipment, and pre-engineered, package units.

Measure Which Must Be
Passed If OPA Is To
Live Okay For Dealers

DETROIT—No matter what happens to the OPA extension bill being debated in the U. S. Senate as this issue of the NEWS goes to press, it seems certain that distributors and dealers in major appliance and refrigerating equipment will get a "break."

If the bill fails to pass, or if it is vetoed by President Truman, OPA will die a natural death as of June 30, the expiration date of the present law. If this should come to pass, it appears more than likely that distributors and dealers will have restored to them any reduction they have suffered in normal margins of profit.

If the version of the OPA extension legislation agreed upon by the House-Senate conference committee is passed by the Senate and gets President Truman's signature, it guarantees to distributors and dealers prewar profit margins.

Here are the major provisions of the OPA extension legislation which affect distributors and dealers:

Reduction of prewar profit margins of wholesalers and retailers of "reconversion" items such as appliances and automobiles would be prohibited. It is presumed that this would mean that any cut in margins that have been brought about by application of OPA's "cost absorption principle" would be restored to wholesalers and retailers.

Producers, manufacturers, and processors are to be allowed prices equivalent to those during the base period (Oct. 1-15, 1941) plus average increases in costs since that time. OPA would be required to make necessary revisions within 60 days after application by industry advisory committees, or, upon failure to do so, the emergency court of appeals could extend the time to 90 days.

If new prices have not been fixed after 90 days, all price ceilings on such items would be eliminated.

This amendment also provides that wholesalers and retailers be allowed the trade markups and discounts prevailing last Jan. 1. No price ceiling could be established which would give wholesalers and retailers a lesser return.

This provision seems to conflict in some respects with the one restoring prewar discounts to those in "reconversion" industries.)

On the matter of price decontrol, the legislation requires OPA to remove price controls when supply and demand of a commodity come into approximate balance. Decontrol is to be handled by a specially created decontrol board, independent of OPA, with power to overrule the Price Administrator, if he failed to act.

Resale Prices Set on
Co-op Refrigerator

CHICAGO—Prices for resales of the Co-op brand household refrigerator have been granted to National Cooperatives, Inc. here by OPA in Order 18 to MPR 598.

On sales by National Cooperatives to regional cooperatives a ceiling of \$150.75 has been established for the model 469 CPA refrigerator. This price is f.o.b. factory and includes the federal excise tax, charge for five-year warranty, and the industry increase granted manufacturers by section 5 (b) of MPR 598.

Resale ceiling price for sales to local cooperatives

Model No. Zone 1 Zone 2 Zone 3 Zone 4

469 CPA \$170.85 \$172.85 \$175.85 \$178.85

The above prices also include the excise tax and charge for the five-year warranty.

A "NATURAL" FOR REFRIGERATORS - STAINLESS STEEL SHELVES



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

*Makers of STAINLESS STEEL AND
STAINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS*

**Violating Regulation 'W'
Injunction Brings \$2500 Fine, 1-Year Sentence**

DETROIT—For violating terms of an injunction restraining the Consumers Home Equipment Co. here from making instalment sales on certain articles without obtaining the down payment required by Regulation W of the Board of Governors of the Federal Reserve system, the corporation has been fined \$2,500 and its president, Avery B. Chereton, has been sentenced to one year's imprisonment.

Federal Judge Ernest A. O'Brien, who passed sentence, also imposed on Mr. Chereton a term of equal length for violating OPA regulations. The terms will run concurrently.

Regulation W requires a one-third down payment on instalment credit sales of certain articles.

Violations of this regulation continued over a period of time during which the company had been repeatedly warned, a statement issued by the Board of Governors of the Federal Reserve system declared. Finally, on July 19, 1945, a decree restraining the company and Mr. Chereton was entered by Judge O'Brien in the District Court of the United States for the eastern district of Michigan, southern division.

On June 14, 1946, Judge O'Brien held the company and Mr. Chereton to be in contempt of court for making instalment sales without the required down payment, contrary to the decree and to Regulation W, the statement said.

Caution to Ex-GI's:

6 Out of 7 Vet Appliance Dealers May Fail Because of Loose Credit Policies

CHICAGO—Of 14 electrical appliance stores opened by war veterans between April 1 and Memorial Day in one Iowa town of 2,700 population, 12 will wind up in bankruptcy. Creditors will get nothing back because whatever is salvaged from the failures will go to the government under the G. I. loan arrangement.

These dark predictions were made by E. B. Moran, manager of the Central Division of the National Association of Credit Men, speaking at the recent convention here of the National Sanitary Supply Association. He said the same situation found in the unnamed town "is going on all over the country."

Veterans are going into business for which they have no ability, Mr. Moran told the convention, with the certainty that they will face the sheriff in short order.

"Before G. I. Joe goes into business, he should first learn what it is all about," Mr. Moran advised. "Here's an opportunity for the credit manager to be of real service."

"He has a right to know how much capital the man has, where it is coming from, and what the veteran knows about running the business he's starting. The credit man could well act as a business counselor and, if advisable, recommend that the veteran go to work for others first, to gain experience and knowledge of business which he now lacks."

Mr. Moran said these other credit conditions are nation-wide:

—A tremendous number of "N. S. F." checks—"more in a week, sometimes, than previously in a year"—are being returned by banks.

—Black market profits are being used to start new businesses which "vanish overnight when income tax collectors catch up with their work."

The answer to this situation, Mr. Moran suggested, is closer coordination between sales and credit management. He proposed that the credit manager should sit in on conferences when sales quotas are being fixed and establish a predetermined ceiling on credit to be extended the company's customers. Thereby, he declared, the maximum amount of profitable business would be assured, with greatly reduced distribution losses.

"It's not a question of production," he said. "Industry is fully able to produce more than can be consumed. The real test for the future is distribution. Costs of distribution are high and must be brought down."

"Loose credit policies are one factor in that high cost item. When an account becomes involved it can easily wipe out all the profits."

"But, if the credit manager is working closely with sales and, through his knowledge of current trends, can establish controls before trouble starts, seven out of 10 potential failures can be avoided."

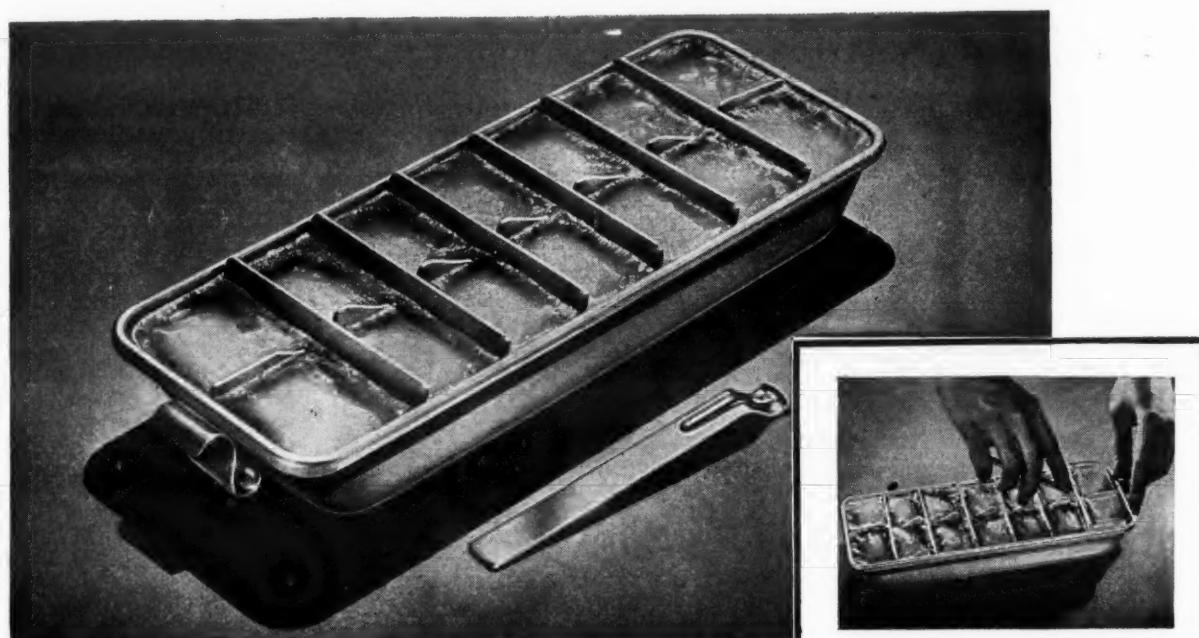
In the past, Mr. Moran declared, there has been too much talk about "credit losses." He described this as "negative thinking."

"Start saying, instead," he suggested, "that you are collecting 99.75% of your sales. You can do it, if you get your sales and credit working together."

"Methods of doing business are undergoing an evolution and no one is exempt from its effects," he pointed out. "You haven't seen anything yet."

"Within six years the changes will surpass anything you now know. If you cannot adjust your operations to meet the new conditions, you won't be here five years from now."

HIGH CONVENIENCE - LOW COST



Inland TILT OUT Ice Cube Tray

Inland's moderately priced, efficient Magic Finish Tilt Out Ice Cube Tray, which combines fast freezing with quick release of full-sized ice cubes, is an outstanding "buy" for automatic refrigerator manufacturers, jobbers, dealers and users.

Two ice cubes at a time or a trayful are speedily released from this aluminum tray by use of the handy Operating Lever, as illustrated at right. Tray comes either with or without pan lifter. This, easy-to-operate, ice cube

tray comes in single tray or double duty Dessert Tray sizes.

This Inland Magic Finish Ice Cube Tray is first choice as low cost original equipment by leading automatic refrigerator makers as well as for replacement sales by dealers. Users find extreme satisfaction in the convenience of its operation.

For prices and further details write to—

INLAND MANUFACTURING DIVISION
General Meters Corporation • Dayton, Ohio

For Two Cubes

As shown in illustration above it is easy to use the Operating Lever and get two or more full-sized ice cubes from the Inland Tilt Out Ice Cube Tray.



For A Trayful

After cubes are loosened the grid is lifted vertically and cubes fall into the single tray pan—or Inland Dessert Ice Cube Tray pan, as shown above.

**FAST FREEZING
QUICK RELEASING
ICE TRAYS BY INLAND**

MANUFACTURING

INLAND

Magazine Survey Finds 19% of Those Planning Home Renovation Will Remodel Kitchens

NEW YORK CITY—Of the 1,935 replies to a *Woman's Home Companion* survey concerning housing plans, 20% of the home owners who plan renovation of present facilities intends to purchase new refrigerators within the next two years, 19% will remodel kitchens, and 17% will buy new ranges.

In the group of those planning to buy a house already built, 5% heads the list of necessary purchases with kitchen equipment, and 21% has need for electrical equipment of all kinds, the survey shows. Gas equipment was on the urgency list of 5%.

Future home builders showed preference concerning size of kitchen, as follows: 7 x 9 ft., 18%; 9 x 12 ft., 41%; 10 x 15 ft., 26%; and 12 x 18 ft., 8%.

Plans to put laundry equipment in

Reconversion Snags, Strikes, Boost in Costs Force Apex to Defer Payment of Common Stock Dividends

CLEVELAND—Directors of The Apex Electrical Mfg. Co. declared the usual dividend of \$1.75 per share on the prior preferred stock of the company on June 18, but deferred dividend action on the common stock, according to an announcement by C. G. Frantz, president.

Mr. Frantz stated that the directors deemed it advisable to defer action on the common dividend, which heretofore has been paid on a quarterly basis of 25 cents per share, because of the difficulties incurred during the first five months of this year in getting the company's plants reconverted

the basement were shared by 52% of *Companion* readers, and laundries adjacent to the kitchen were preferred by 38%, according to the survey.

Of the entire group of readers surveyed, 62% is not moving, 16% plans to build in the near future, 9% intends to buy, 8% will rent homes, and 5% has no definite plans.

There is a decided lack of brand consciousness by the home owner and the potential home owner, according to survey officials. "When it is realized that eight billion dollars will be spent by these people, it becomes apparent that many new products and brands coming into the market have a unique opportunity to build consumer preference by national advertising," officials commented.

from war work to production of its regular products—vacuum cleaners, washers, and ironers.

He said that the plants were closed for two months during this period due to the steel and other strikes which seriously interrupted the flow of materials.

Mr. Frantz further stated that price adjustment has now been authorized by OPA which will increase selling price so that the company should be able to operate at a profit if the present production schedules of about 85% of capacity can be maintained.

Members of the Refrigeration Equipment Wholesalers Association

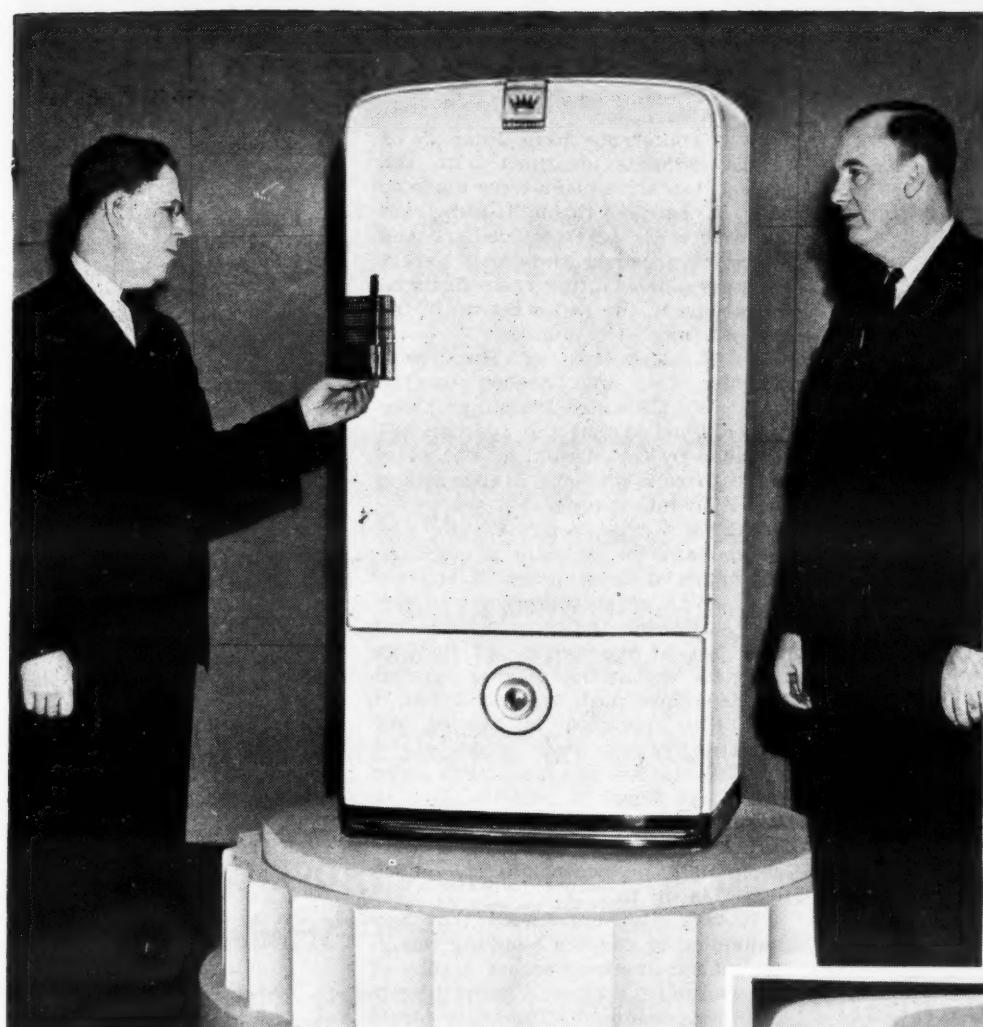
Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

**TED GLOU
CENTRAL SERVICE SUPPLY CO**

516-18-20 E. Erie Blvd., Syracuse, N. Y.
209-211 Jefferson Ave., Scranton, Pa.

Phone 5-4000
Phone 3-4000

NOW-The great new Frigidaire Cold-Wall is here



Presentation of the new Frigidaire Cold-Wall is being made to the dealer organization through a series of meetings from coast to coast. Here, M. M. Roberts, Works Manager, and H. F. Lehman, Asst. Gen. Sales Mgr., discuss one of the new Cold-Wall models before the distributors' meeting.



Cold-Wall Advertising is reviewed in proof form by L. A. Clark, Asst. Gen. Sales Mgr., and F. H. Peters, Adv. Mgr. Present plans call for insertion of Cold-Wall advertising in a long list of national publications.



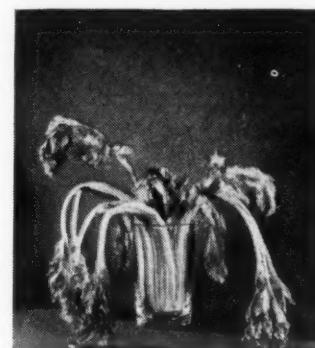
Final Examination of the first new Cold-Walls is made by J. W. Krueger, General Superintendent, Plant No. 2, at Dayton. Rigid specifications and requirements for high quality workmanship are a "must" at Frigidaire. They are reflected in all Frigidaire products.



The Still, Moist-Cold of the Frigidaire Cold-Wall food compartment keeps food fresh without covering. Also, two Super-Moist Hydrators provide super-moist cold air for the storage of fruits and vegetables.



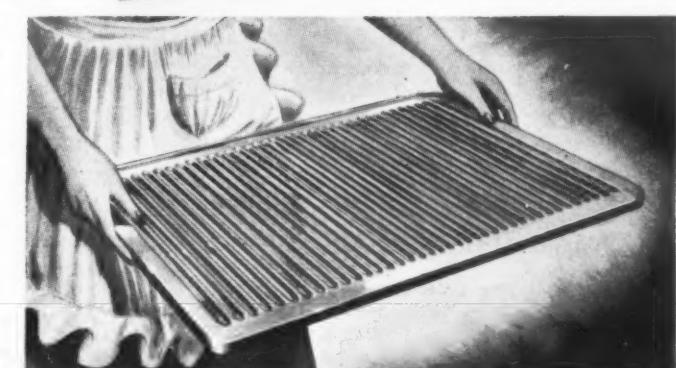
Frigidaire's Engineers developed the Cold-Wall. The Arthur D. Little Research Laboratories proved the Cold-Wall keeps food better.



Actual Photographs: celery on left was stored in a Cold-Wall; that on the right in a conventional type refrigerator...both for 7 days, uncovered. Here's evidence of superiority of Frigidaire Cold-Wall.



The Super-Freezer Chest of the new Frigidaire Cold-Wall provides the freezing cold needed for the safe storage of frozen food, making frozen desserts, ice cubes; or freezing your own fresh food.



Aluminum Shelves are a new feature in the Frigidaire Cold-Wall. All one-piece, light-weight, rustproof and sanitary, they meet the present day demand of housewives for newer, more modern kitchen equipment.

You're twice as sure with two great names

Frigidaire made only by **General Motors**

Jordon Representative

RALPH WEINER

Ralph Weiner to Contact New York State Dealers

PHILADELPHIA — Ralph Weiner will represent the Jordon Refrigerator Co. in New York State excluding metropolitan and suburban New York City, it has been announced by the Jordon company.

Recently discharged from the army after serving two years in the European theater, Mr. Weiner will contact dealers in his territory on completion of a training course. His headquarters will be in Rochester.

20 Distributors Named To Handle Frostair Unit

CHICAGO—With production scheduled to begin sometime this summer, the Frostair Division of the General Tire & Rubber Co. has appointed 20 distributors for its combination refrigerator and freezing unit to be manufactured by Liquid Carbonic Corp. and distributed by General Tire, announces Max M. Gilman, general manager of the Frostair Division.

Delays and uncertainties in delivery of material have prevented setting up any definite production schedule, according to Mr. Gilman.

Powered by two compressors, the "Frostair Duplex" has 7 cu. ft. of standard refrigerated storage space and 3½ cu. ft. of freezing space. There are separate doors for each compartment.

Named initially were E. B. Latham Co., New York City; Kelly-Howe-Thompson Co., Duluth, Minn.; Motor Parts Co., Philadelphia; Graybar Electric Co., Boston; D'Elia Electric Co., Inc., Bridgeport, Conn.; Edward Joy Co., Syracuse, N. Y.; Pittsburgh Products Co., Pittsburgh; Peninsular Distributing Co., Detroit.

General Utilities Corp., Milwaukee; Graybar Electric Co., Chicago; North Pacific Supply Co., Seattle; Charles S. Martin Distributing Co., Atlanta; York Supply Co., Cincinnati; Northern Ohio Appliance Distributors, Cleveland; Thompson & Hamilton, Inc., Columbus, Ohio; Gem City Appliances, Inc., Dayton, Ohio; and Southern Equipment Co., San Antonio, Tex.

Panelyte Promotion

GEORGE E. VYBIRAL

G. E. Vybiral Appointed Assistant Chief Engineer

NEW YORK CITY — George E. Vybiral, formerly project engineer in design and production, of the Panelyte Division, St. Regis Paper Co., has been promoted to assistant chief engineer, it is announced by P. P. Ryan, plant manager.

During his six year's service with the firm, which makes refrigerator door and lid assemblies, Mr. Vybiral also was a service engineer in the sales department.

CRMA Publishes Booklet To Help Dealer Regulate His Financial Problems

CHICAGO—Within the next week or 10 days every sales outlet handling the commercial refrigerator line affiliated with the national association will have received his copy of the new "Dealer Operations Manual," according to J. H. Coolidge, of Sherer-Gillett Co., President of Commercial Refrigerator Manufacturers Association.

At a conference here June 25 of CRMA officials identified with the project, tentative plans were made to offer a service through individual manufacturers whereby dealers and distributors would be given expert assistance in adapting their financial operations to the ratios set up in the Manual for their guidance.

W. B. McMillan, of Hussmann-Ligonier Co., who headed up the work of CRMA's Planning Committee, warned that the "yardsticks" provided by the Manual do not guarantee to turn an unprofitable selling operation into a profitable one.

"All that these figures do," he pointed out, "is to point a questioning finger at those items of expense in a selling organization's profit-and-loss statement that are out of line with typical experience. If there is a logical explanation for the particular departure, well and good, but if not, the operation is headed for trouble."

"The dealer or distributor who takes the time to put the Dun & Bradstreet ratios to work for him in an intelligent and conscientious manner, can do a better job; how much better is up to him."

It was also announced that any individual or concern handling refrigerated fixtures may secure a copy of the manual for \$1 each by writing to the association. Comments from dealers or distributors who have examined the data have been highly enthusiastic, Mr. Coolidge stated.

York Shuts Down July 22-27

YORK, Pa.—The York Corp. here will close down completely from July 22 to 27 for its annual physical inventory. The management has asked suppliers not to make any shipments to the factory during that time.

Dallas Blast --

(Concluded from Page 1, Column 4) spread through the hotel, overcoming a number of persons, and hampering rescue efforts.

Refrigeration men and other experts point out that had ammonia been leaking in sufficient quantities to cause the explosion, no one would have been able to remain in the fumes. Nearly 150 employees were in the basement at the time of the blast, according to estimates of fire officials.

"There was no failure of the existing [refrigeration] equipment," stated Fenton Baker, president and managing director of the hotel.

"There was no failure in the air conditioning system. It never ceased operating. The air conditioning operating system is in the engine room proper, which was not severely damaged," he explained.

No statement has been made by either a city official or a hotel representative which attributes the cause of the blast to ammonia leaking from refrigeration systems.

Fire Marshall Hilton did state that an explosive gas pocket measuring 52 ft. long, 37 ft. wide, and 2 ft. high, had apparently collected between the top of the refrigerating rooms and the basement ceilings. The explosive mixture was apparently ignited, he said, by an electric arc, a flame, or smoldering material.

Damages caused by the blast have been estimated at \$500,000 or more, reports L. M. Snell, who operates Snell Refrigeration Supply Co., Dallas wholesaler of refrigeration equipment.

OPA Assigns Prices on Standley Milk Coolers

ST. LOUIS—Maximum prices for three models of milk coolers produced by Standley & Co., Inc. here have been established by OPA in Order 599 to MPR 591 as follows:

Model	Dis- tributors	Dealers	Con- sumers
MC-41-4 can			
with pump ..	\$275.00	\$345.00	\$460.00
MC-61-6 can			
with pump ..	315.00	392.00	525.00
MC-8-8 can			
with pump ..	360.00	450.00	600.00

Actual freight charges and crating charges not to exceed \$6 may be added to the above prices.

Success... fitting ~~sidem~~ for superior performance

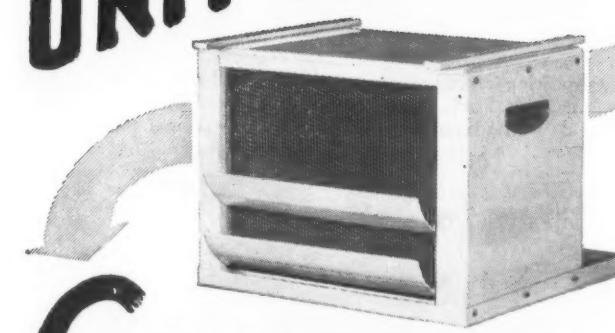
Insure yours by installing Mills Compressors and Condensing Units.

MILLS INDUSTRIES, INCORPORATED - REFRIGERATION DIVISION

4100 FULLERTON AVENUE - CHICAGO 39, ILLINOIS



Filterpure
UNIT COOLERS



COMPARE --

- New exclusive Betz coil construction
- Guaranteed ratings
- Built-in air distributor
- Heavy duty motor with oversize oil reservoirs
- Built-in efficiency loop
- Patented liquid distributor
- Fan and motor mounted in safety guard
- Slotted hangers for easy installations
- Complete range of capacities

Sold by Leading Refrigeration Wholesalers

BETZ CORPORATION
HAMMOND, INDIANA

HUDSON CONSTANT PRESSURE CARBONATORS

Hudson CONSTANT PRESSURE Carbonators have No Motors — But Deliver

CONSTANT PRESSURE at the draft arm — this

CONSTANT PRESSURE makes them practical for use in fountains which require—

CONSTANT PRESSURE in order to operate any drink dispensing apparatus such as Coca-Cola and Root Beer dispensers which require—

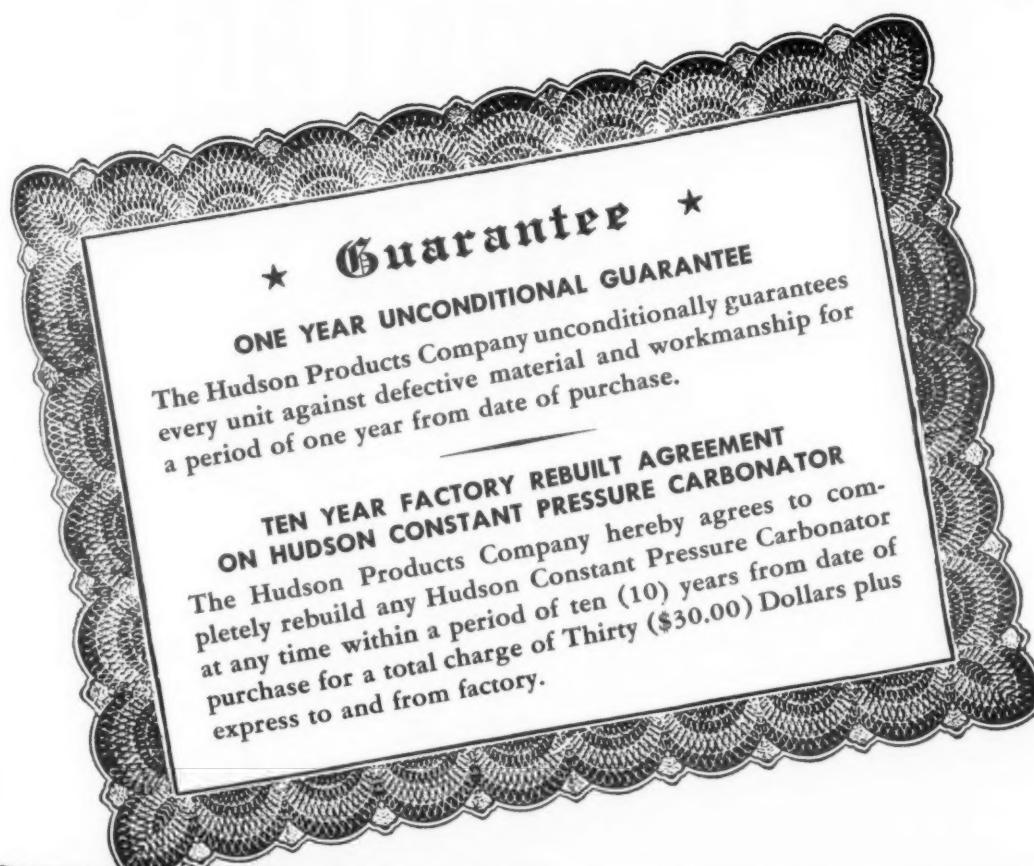
CONSTANT PRESSURE in order to give an even mix of syrup and soda water at all times. This—

CONSTANT PRESSURE feature is exclusive with Hudson. Since no other motorless carbonator has—

CONSTANT PRESSURE—because Hudson has the Constant Pressure feature thoroughly covered by patents issued and pending. Therefore, if you are offered a motorless carbonator—**ASK IF IT HAS**

CONSTANT PRESSURE, and if not, then—buy HUDSON, because Hudson makes the **ONLY** motorless carbonator having **CONSTANT PRESSURE!**

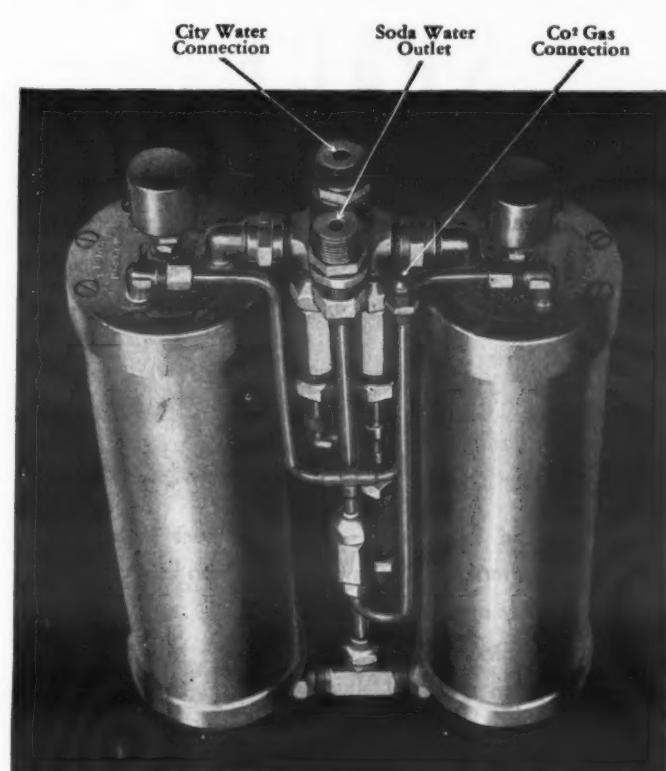
**USED AND ENDORSED BY ICE CREAM MANUFACTURERS EVERYWHERE!
STANDARD EQUIPMENT WITH MANY SODA FOUNTAIN MANUFACTURERS!**



Thousands of these
Carbonators now in
daily use throughout
the world.

WE CAN MAKE
PROMPT
DELIVERY!

Export Division
2111 Woodward Ave.
Detroit 1, Mich.
Cable: FORACO



Above Cut Shows Simplicity of Hook Up.
Only Three Connections to make.

A Quality Product from the House of Hudson

HUDSON PRODUCTS COMPANY

4400 ST. AUBIN AVENUE

TEmple 2-0690

DETROIT 7, MICHIGAN

Hotpoint Kitchen Package for Vets



Above two models are shown kneeling before one of Hotpoint's 1,000 all-electric kitchen appliance packages which the firm announces will soon be distributed to veterans on a nation-wide priority plan. The appliance group in the background consists of an electric range, refrigerator, cabinet sink, as well as five wall and base cabinets. Optional items not shown are: a dishwasher, a disposal unit, and laundry equipment.

10 Appliance Dealers Set Up Summer Store Hours

CASPER, Wyo.—Ten home appliance retail stores here have agreed to close Saturday afternoons, and stay open only from 8 a.m. to 5 p.m. on other weekdays until September. The cooperating firms are Firestone

Stores, Forster Electric Co., Montgomery Ward, Mount & Ritzman, Mountain States Appliance Co., Olsen Radio Co., Radio Supply Co., The Sport Shop, Union Electric Co., and Wyoming Home Service.

Pontiac Dealers Plan to Convert Flint Building Into Department Store

FLINT, Mich.—Purchase of Kobacker's Furniture Store in downtown Flint by J. J. Wainger and J. P. Toombs, owners of W.K.C., Inc., one of the largest retailers of appliances, furniture, and jewelry in Pontiac, Mich., was announced recently.

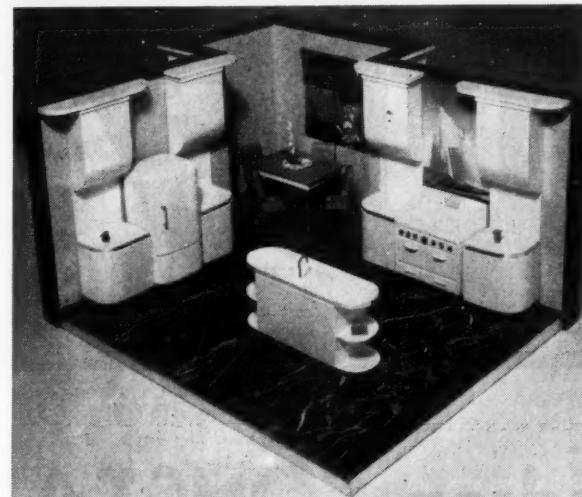
The new owners will convert the eight story building into a department store, retaining the Kobacker name, it was reported. They said the purchase of the store and planned remodeling, which includes complete air conditioning, will cost more than a half million dollars and the purchase of the business and stocking of the new departments will add another half million.

The interior will be extensively remodeled, including the removal of many partitions and the eventual adoption of all eight floors and the basement as sales rooms. The building just behind the store has been leased for warehouse space, it was reported.

Mr. Toombs will take active control of Kobacker's, it was announced. In addition, Lew Cohn, prominent in Detroit merchandising, has been named merchandising manager, and George Berdan, formerly of Himmelhoch's in Detroit, has been hired as display director.

The store will carry nationally advertised brands and will present complete assortments in each department as far as possible.

Lilliputian Kitchen Depicts Arrangements



At left is one of the Laclede Gas Light Co.'s three tiny wood-carved model kitchens illustrating the step-saving that can be achieved through careful kitchen engineering.

St. Louis Gas Firm Employs 3 Miniature Kitchen Displays to Aid Dealer Sales

ST. LOUIS—Advanced ideas in modern kitchen planning are demonstrated by the Laclede Gas Light Co. here in a display of three miniature model kitchens.

The tiny kitchens, which were built by E. H. Lamprich, display manager for the St. Louis utility, will be used in connection with appliance dealer merchandising programs and to illustrate what can be accomplished with careful kitchen engineering, according to R. A. Vandagriff, sales manager.

At present they are scheduled for regular exhibition in the windows of the Laclede building for several weeks, but may eventually be loaned to dealers who will feature "one price package kitchens," it was said.

Constructed to exact scale, the three diminutive kitchens required two months to build. Each contains an exact model of a Servel Electrolux refrigerator and a Magic Chef gas range carved from bassa wood.

Each of the kitchens has a different arrangement of working space and a separate color scheme, but all three stress appearance combined with practical utility. Streamlined curves are used, but only where they dovetail functionally. Each has a triangular working area calculated to save steps.

In making up the models, Mr. Lamprich kept St. Louis home dimensions in mind.

The first kitchen is of the "island" type, the name coming from the isolated position of the sink in the center of the room. Cabinets throughout this model have no handles, opening from the bottom up or swinging to one side as in a roll top desk.

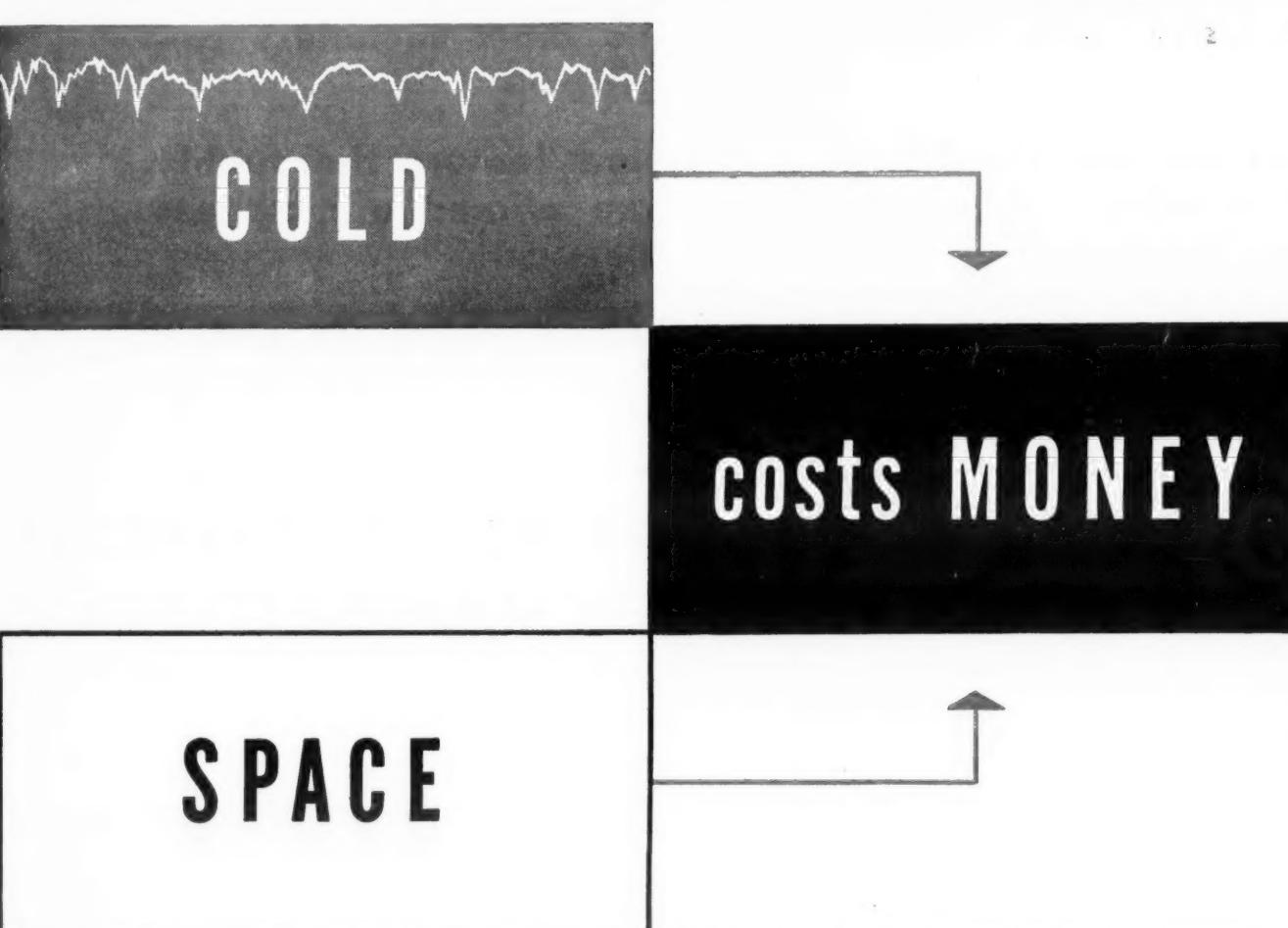
The second model is the "peninsula" type, so called from the breakfast bar which juts into the dining room area. The bar can be replaced with a table and chairs if desired. Walls and linoleum are done in blue oil cloth to simulate washable linoleum throughout.

The third kitchen, which evoked much comment when shown at a builder's convention here, is "L" shaped. It permits a flexible arrangement of sink, floor cabinets, range, and refrigerator. Easily converted to right or left, this type is said to fit in standard St. Louis homes.

USO Becomes Appliance Shop

WACO, Tex.—In a former USO building here, C. D. Orr, Jr., and O. K. Orr have established an appliance shop featuring a full line of electrical appliances, gas refrigerators, and ranges. General Electric is the major line handled.

Known as Orr's, the store will include a complete gift shop stocked with all kinds and types of giftwares.



save all three with

In industrial and commercial cold equipment especially, the savings you make with Santocel insulation keep coming back to you, day after day.

Because Monsanto's silica aerogel is "the world's most efficient insulation material" it is able to cut conventional insulation bulk in half. Think what this means in increased capacity . . . greater efficiency . . . and, in transport units, bigger payloads every day.

If reputed costs are holding you back from using Santocel, let one of our engineers sit down with you and figure exactly how much less Santocel insulation will cost you, through the years.

Technical data, samples and the assistance of our Santocel specialists in adapting this unique material to your plans, are all yours on request. Write, wire or phone: MONSANTO CHEMICAL COMPANY, Merrimac Division, Boston 49, Mass.



SANTOCEL

Santocel: Reg. U. S. Pat. Off.

Quick Facts About Santocel:

- 1. INSULATING VALUE:** Thermal conductivity of Santocel is lower than that of any other material or methods of insulation employed except a highly evacuated, silvered-surface space.
- 2. DENSITY:** Although low for a free-flowing powder, Santocel's density is about equal to that of other loose fill insulators and is higher than some bat types and the foil types.
- 3. APPLICATION:** Santocel can be applied by building a retaining jacket about the object to be insulated, usually of lightweight sheet metal, and filling the intervening space. Being free flowing, it can be easily applied to such a construction.
- 4. SETTLING:** Santocel settles to a stable density about as rapidly as other fill types.
- 5. MOISTURE SORPTION:** Santocel will not pick up significant quantities of water from the air.

IMPORTANT NEWS

★ IMMEDIATE DELIVERY

EXPANSION VALVES
CAPACITY BOOSTERS

★ ONE WEEK DELIVERY

FLASH COOLERS
ICE CUBE MAKERS
FIN COILS

"Another Milestone In Our Reconversion
To The Famous Peerless Policy"

PEERLESS
of AMERICA, Inc.
333 N. Michigan Ave., Chicago 1, Ill.

Richmond Now Enforces Rule Requiring U.L. Label on Appliances

RICHMOND, Va.—A city ordinance forbidding the sale in Richmond of electrical appliances not approved by the Underwriters Laboratories will be strictly enforced, according to a warning sounded May 24 by Marshall Folkes, chief of the City Bureau of Electrical Inspection.

Mr. Folkes said one local store which had advertised a sale of electric irons was forced to call it off after the stock had been inspected by a city electrical inspector.

Asserting that electrical appliances that are not approved by the Underwriters Laboratories are unsafe, Mr. Folkes said that local merchants have been given plenty of warning that the restrictions which had been lifted during wartime would now be enforced.

"Since May of last year," he said, "we have been giving the merchants extensions on the time the provisions of the city ordinance would be applied to the sale of electrical appliances. They have had plenty of time and no unapproved appliances can be sold in the city."

Admiral Corp. Assigns Three Regional Managers

CHICAGO—Assignment of three new regional managers for the Admiral Corp. has been made public by W. C. Johnson, manager of field activities for the firm.

E. M. Perkins will manage the northeastern region. With his home office in Boston he will supervise activities in Portland, Springfield, Albany, Syracuse, Providence, New Haven, and Wilkes Barre.

In the central region, J. F. Gilbarre will work from headquarters in Cleveland and cover Cincinnati, Columbus, Toledo, Rochester, Buffalo, Charleston, Bluefield, and Pittsburgh.

P. R. Dye will take charge of the midwestern region centered at Milwaukee and including Escanaba, La Crosse, Minneapolis, Fargo, Detroit, Peoria, Saginaw, and Grand Rapids.

Home Appliances Will Share \$80,000 Addition to Nyden's

BRIDGEPORT, Conn.—Nyden's department store here has revealed plans for the construction of a two-story addition to present quarters in order to provide for additional lines of home appliances and men's clothes. The new addition, to cost \$80,000, will include 5,000 sq. ft. of floor space.



Gilmer BELTS

Gilmer V-Belts are easy to sell, and they stay sold. That's because they fit perfectly, retain their fit, and give dependable service. And there's a Gilmer V-Belt for every air conditioning and refrigeration unit, for they're made from the largest assortment of V-moulds in the world.

Gilmer V-Belts are supplied in carefully chosen assortments that minimize capital investment. Stock rugged, long-lived, efficient Gilmer V-Belts. Get in touch with your jobber today.

L. H. GILMER COMPANY
Tacony, Philadelphia 35, Pa.
Division of United States Rubber Company

Consumer Trend

More Credit, Less Cash on the Line, Forecast for Home Appliance Market

WASHINGTON, D. C.—More credit and less "cash on the line."

That's what the Federal Reserve Board forecasts for the household appliance market during the coming months. Noting a marked upswing in the use of consumer credit in the first four months of 1946, the Reserve Board predicted that consumer borrowing "will be sharply accentuated" as more and more goods become available.

During its survey of credit trends in consumer purchases of appliances, furniture, and automobiles, the Board found that instalment sellers of appliances were among a group that had extended 50% more credit in the first third of the year than in the corresponding period of 1945.

In fact, credit figures for recent months showed that buying on credit

has expanded more than buying for cash, a definite shift in consumer buying habits during the war when most persons paid with cash, the Board pointed out. Also cited in the report was the increasing extent to which cash expenditures are being financed out of borrowed money.

Responsible for the rising crescendo of consumer borrowing that began late in 1945 are two factors. One is that sellers are not only driving to expand sales, but small loan agencies, including banks, are out to increase their own lending operations. The second reason stems from the fact that changing economic conditions have resulted in a growing body of customers who are either unwilling or unable to pay cash.

Said the Board:

"In the light of experience, . . .

it is to be expected that the recent upward course of consumer credit may be sharply accentuated as more automobiles . . . furniture, household appliances, etc., become available."

A decrease in the cost of customer financing was seen as the chief advantage of the current competition among various types of credit agencies. The Board, however, coupled its survey of consumer credit with a plea for the maintenance of Federal consumer credit regulations administered by the Board. It was emphasized the premature utilization of consumer credit while goods are scarce would result in a higher cost of living without a commensurate boost in production or employment.

"Consumer credit regulation," the Board report stated, "along with more fundamental measures for promoting economic stability, continues to be a form of Governmental action that serves an important public service."

Such control, however, must necessarily be "flexible," the Board declared, adding that the objectives and requirements of Federal regulation of consumer credit "undergo change from time to time."

Westinghouse Appoints Marine Vet to Promote Vacuum Cleaner Sales

MANSFIELD, Ohio—Robert E. Dobson, a marine corps veteran, has been named merchandise manager for Westinghouse vacuum cleaners and will handle sales promotion and training for that product, it was announced by W. E. Slabaugh, Jr., manager of the vacuum cleaner department of the Westinghouse electrical appliance division.

As a communications officer in the south Pacific theater, Mr. Dobson was awarded the Naval Letter of Commendation ribbon. He left the service as a first lieutenant after three years active duty.

With the Hoover Co. before the war, Mr. Dobson managed that firm's exhibit in the New York World's Fair in 1939. He was personnel manager in charge of sales training in the New York area.

Mr. Dobson is a graduate of Fordham university.

EATON PERMANENT MOLD GRAY IRON CASTINGS for Connecting Rods



★ STRENGTH

★ FREE MACHINABILITY

★ GOOD BEARING SURFACES

★ UNIFORM STRUCTURE

The specific qualities you want in connecting rod castings are provided in Eaton Permanent Mold Gray Iron Castings. Good tensile strength, uniform structure throughout the casting, and the ability to take a fine finish on bearing surfaces are characteristics of all Eaton Permanent Mold Gray Iron Castings.

Free machinability makes for production economy. Proper annealing eliminates any chance of distortion after machining.



THE EATON PERMANENT MOLD MACHINE IS A SYMBOL OF THE QUALITY OF GRAY IRON CASTINGS PRODUCED BY THE PERMANENT MOLD PROCESS.

EATON
MANUFACTURING COMPANY
FOUNDRY DIVISION
9771 French Road • Detroit 13, Michigan

© 1946, EATON MFG. CO.

ASRE OK's New Sections For Atlanta, Buffalo, Dallas-Ft. Worth Areas

NEW YORK CITY—Formation of three new sections of the American Society of Refrigerating Engineers—in Atlanta, Buffalo, and the Dallas-Ft. Worth areas—has been approved by council of the society.

C. T. Baker, consulting engineer and professor at Georgia Tech, C. P. Goree, and Den M. McDougall comprised a committee appointed to arrange for organizing the new Atlanta section. George Braungart, a life member of A.S.R.E., presented the application for this section's charter during the recent spring meeting of the society. The organizational meeting was addressed by Dr. J. G. Woodroof and Dr. Mary E. Spiers of the Georgia Experiment Station.

In Buffalo, the first meeting was arranged by C. N. Deverall, Harold E. Rieckleman, and R. H. Mollenberg, who presided. Attending from the

New York City A.S.R.E. headquarters were Paul B. Christensen, chairman of the membership committee, Robert C. Robertson, and James J. Corey.

Headed by Mr. Deverall, the Buffalo committee on organization includes Robert Morgan, L. N. Reed, A. F. Reiss, Frank E. Heikla, and M. A. Pendleton.

Dean W. R. Woolrich of the University of Texas and Louis M. Snell of Dallas led the preliminary drive for the Dallas-Ft. Worth section. Louis P. Reiss is chairman of the organization committee composed of Mr. Snell as secretary, Frank M. Angus, Leslie F. Harmen, Wm. D. Knox, Hugh S. Martin, J. R. Nix, R. F. Palley, and W. G. Pujol.

Ibis Given Ceiling Prices On 4-ft. Beverage Cooler

DALLAS, Tex.—Ibis Mfg. Co., Inc., here has been given ceiling prices for its 4-ft. dry beverage cooler.

Announced by OPA in Order 620, MPR 591, the top prices are:

On sales to—
Bottlers Retailers

4 ft. dry beverage cooler \$170 \$218

OPA Freezer Price Set \$600,000 Freezing Plant For Baseline Woodcraft

\$600,000 Freezing Plant Sought by City in Texas

PORTLAND, Ore.—A 12-cu. ft. home freezer manufactured by Baseline Woodcraft Co. here has a retail ceiling price of \$430, according to Order 619, recently issued by OPA under MPR 591.

Following is the complete price schedule:

On sales to— Distributors	Deal- ers	Con- sumers
12 cu. ft. home freezer, 1/4 hp. condensing unit	\$215	\$258

Alpha Electric to Handle Detroit Deepfreeze Servicing

DETROIT—Alpha Electric Refrigeration Co., 1115 E. 7 Mile Road here, has been appointed factory service representative for Deepfreeze industrial products manufactured by Deepfreeze division of Motor Products Corp., it was announced recently.

FREEPORT, Tex.—The city has applied to the Federal Works Agency for advance funds to cover the costs of engineering surveys and architects designs for a \$600,000 quick-freezing plant here. The plant will be used primarily for the shrimp industry, but will later be expanded for fresh fruits and vegetables.

2 Models of Dembek Cases Priced By OPA

NEWARK, N. J.—Maximum prices recently announced by OPA for frozen food show cases and freezers manufactured by E. Dembek here include retail ceilings of \$480 for a 15-cu. ft. model and \$600 for a 20-cu. ft. unit.

OPA established the following price schedule, announced in Order 621, MPR 591:

On sales to— Distributors	Deal- ers	Con- sumers
20 cu. ft. 1/2 hp. condensing unit	\$300	\$360
15 cu. ft. 1/2 hp. condensing unit	240	288
		480

Makers of Bakery Air Conditioners Granted 9% Rise in Base Prices

WASHINGTON, D. C.—Manufacturers of air conditioning units used in dough rooms, proof boxes, and cooling rooms of bakeries have been authorized by OPA to increase their base prices by 9%.

At the same time, OPA granted permission for resellers to add the resulting dollar-and-cent increases in net invoiced cost to their existing ceilings. The price boosts also apply to all repair and replacement parts.

The air conditioning units are among 80 specific items of bakery machinery and equipment for which prices were adjusted by Order 647, RMPR 136, effective June 18.

In granting the 9% increase to manufacturers, the agency added the exception that "if the manufacturers' base prices are approved by OPA as 'in-line' prices under section 9 (c) of Revised Maximum Price Regulation 136, subsequent to June 18, 1946, the maximum prices shall be the prices so approved."

"Base prices" are defined as "the maximum prices established under section 7 or computed under sections 8, 9, or 10 of Revised Maximum Price Regulation 136 before the addition of any increase provided to an individual manufacturer by individual adjustment under the provisions of Revised Maximum Price Regulation 136 or Supplementary Order No. 142."

Ex-Capt. to Sell Appliances

STIGLER, Okla.—The Stigler Furniture & Appliance Co. was opened here by Edwin W. White, an ex-Army captain, with Hercel Dobyns as purchasing agent and temporary sales manager.

Mid-West Branch Manager

Established manufacturer of automatic controls for Heating, Refrigeration and Industrial applications requires executive with electrical or mechanical engineering background. Exceptional opportunity with salary plus commission. Forward complete information for personal interview.

Box 2014, Air Conditioning & Refrigeration News

"RECOLD" WATER DEFROST

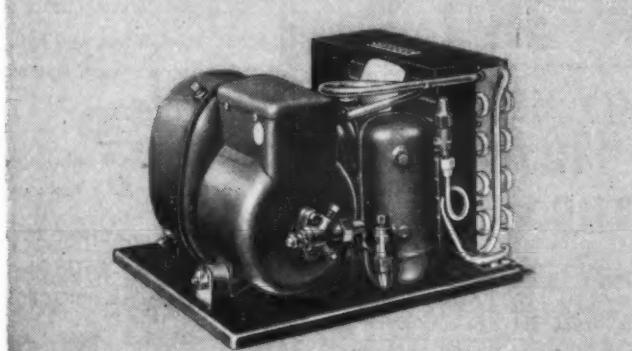


RECOLD COILS WATER DEFROST
CANADA PAT 294,203 U.S. PAT 2,710,393
NEW ZEALAND PAT 87-198

REFRIGERATION ENGINEERING INC.
LOS ANGELES - CALIFORNIA

*Servel's new "Supermet" condensing units will serve dealers and fixture manufacturers in every vital field

- 1. STORE FIXTURES
- 2. MILK COOLERS
- 3. HOME LOCKERS
- 4. BEVERAGE COOLERS
- 5. VENDING MACHINES
- 6. ROOM COOLERS
- 7. FARM FREEZERS
- 8. WATER COOLERS
- 9. INDUSTRIAL COOLING
- 10. VEHICLE REFRIGERATION



Servel, Inc.
Electric Refrigeration Division, Evansville 20, Indiana

This is one in a series of advertisements featuring the scores of new machine tools and processes now being used to produce Servel Supermetics. Reprints are available to dealers individually or in sets as series progresses.

Amana HOME FREEZERS

MODERN

- FREEZER-COOLERS
- HOME FREEZERS from 5 to 123 cu. ft. food capacity
- COOLERS

Refrigeration Division

AMANA SOCIETY

AMANA, IOWA

Idaho Locker Operator Needs No Chill Room

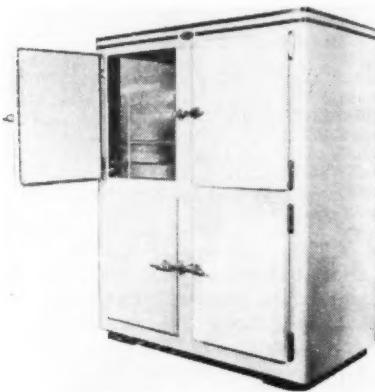
NAMPA, Idaho—By "over-powering" locker plant refrigeration units, and operating at temperatures from 0 to -8° F., locker operator H. E. Mackey of the Poor Boy market here believes he has successfully eliminated the need for a separate chill room.

The Poor Boy concern, which combines a retail butcher shop and a 600-unit locker plant, has experimented with refrigeration in all phases—and came up with the conclusion that properly processed and wrapped meats, stored at below zero temperature, will freeze as efficiently as if passed through a sharp-freeze chamber.

Meats after processing are wrapped in locker paper, and simply stored in the wooden locker room. A 6 x 6 York compressor, substantially more powerful than would otherwise be required, holds the temperature to around -5° F.

New Jordon Line Features Reach-In, Frozen Food Box, And Combination Model

PHILADELPHIA—The new R-42 line of reach-in commercial refrigerators manufactured by the Jordon Refrigerator Co. here, includes the "JFC" model for normal refrigeration or temperature, the "ALT" all low temperature model for frozen foods storage, and the "DT" dual-temperature cabinet for both normal refrigeration and frozen food storage,



it was announced by Alfred L. Levin of the Jordon advertising department.

Only the normal temperature "JFC" model is in quantity production at the present time, Mr. Levin said, but the low temperature models will be in production very shortly.

The entire line has similar streamlined design and each model has a storage capacity of 42 cu. ft. The dual-temperature cabinet provides 6 cu. ft. of frozen food storage space.

All models are equipped with a new Jordon designed "Climatic Conditioning" coil. It is claimed that in factory and field tests, it has been proven that these new coils operate without freezups and without forming heavy frost on cooling surfaces under any atmospheric conditions.

Designed for remote operation, the refrigerators are constructed of all welded heavy gauge steel with 4 in. of approved insulation, wrapped in moisture-proof felt sheathing in all walls. They are also equipped with adjustable, heavy tinned, steel shelves.

Now Ready..... THIS SENSATIONAL NEW DEVELOPMENT!

FREEZRLARM



Here's a NEW, effective way to render real SERVICE to every customer. FREEZRLARM is the exclusive, self-contained warning signal which sounds an alarm whenever temperature rises, from ANY cause. Not connected in ANY way with electrical system. EVERY OWNER OF FREEZER OR LOCKER PLANT NEEDS ONE. Write today for our liberal dealer proposition.

FREEZRLARM COMPANY

832 S. LUDLOW ST., DAYTON 2, OHIO

Klug, Baughman Appointed To Posts in Westinghouse Refrigeration Department

PITTSBURGH—Appointments of H. A. Klug as merchandise manager and J. B. Baughman as product supervisor in the refrigeration specialties department at the East Springfield (Mass.) Works of Westinghouse Electric Corp. were announced recently by H. F. Hildreth, department manager.

Mr. Klug was formerly project manager of war plant construction for Frank A. McBride Co., mechanical contractor of Paterson, N. J. During eight years with Frigidaire Division of General Motors Corp., he was sales engineer, district representative, and district dealer manager.

Mr. Baughman has been filling various field and headquarters assignments in Westinghouse's refrigeration sales department for the past several years. After receiving his electrical engineering degree from Penn State College, he enrolled in the Westinghouse student training course at East Pittsburgh and then served in the rectifier sales section there. Later, he was transferred to the commercial cooking department in the electrical appliance division at Mansfield, Ohio.

As merchandise manager, Mr. Klug will be responsible for sales of milk, beverage, and water coolers, farm freezers, room air conditioners, reach-in refrigerators, and condensing units for other types of commercial refrigeration. Mr. Baughman will be in charge of product development and production.

Store May Handle Huge Volume of Frozen Foods

BUFFALO—Equipped with refrigeration facilities that will handle several carloads of frosted foods, a new \$1,000,000 food warehouse and supermarket will be built here by Danahy-Faxon Stores, Inc.

"Nothing definite has been decided on a location as yet," Mr. Cauley declared, "but we have boiled the search down to two sites." Danahy-Faxon's warehouse and offices have been at the Niagara Frontier Food Terminal for about 14 years.

The warehouse will be a one-floor structure with 200,000 sq. ft., 500 ft. long and 400 ft. deep. The supermarket will have 30,000 sq. ft. with parking facilities for 250 to 400 cars. Construction will start this year and be completed in 1947. Contracts will be awarded in about a month.

Georgia Leads Southeast in Number of Locker Plants

ATHENS, Ga.—Georgia leads the southeast in refrigerated locker storage plants, having 150 already in operation and 50 more under construction, declared Dean Paul W. Chapman of the College of agriculture at the University of Georgia here.

By 1950, Georgia will have 500 locker plants with numerous freezing plants and locker services made available to large cities, he predicted.

District Sales Manager



AL STEIN

Stein Heads Southeast For United Refrigerator

ST. PAUL—Al O. Stein of Danville, Va., has been appointed district sales manager in the southeastern states for United Refrigerator Mfg. Co. here, the company has announced.

Starting in 1925 with Kelvinator in Detroit, Mr. Stein has since acted as commercial sales manager for distributors of both Kelvinator and Norge products in Florida, Virginia, North Carolina, and Canada, it was said.

Gravem-Inglis Bakers to Sell Frozen Vegetables, Fruits in Large Cities

STOCKTON, Calif.—The J. I. Frozen Foods Co., an off-shoot of the Gravem-Inglis Baking Co. here, will soon market a line of frozen fruits and vegetables in a few large cities.

Initial products to be placed on the market will be bing cherries, apricots and peaches, followed shortly by asparagus, artichokes, cauliflower, and green beans, the magazine said.

Because of the small pack expected this year, the company probably will limit its distribution to New York, Boston, Philadelphia, Cleveland, Chicago, Los Angeles, and San Francisco, it was predicted.

In advertising its products, J. I. Frozen Foods will emphasize the government seal, U. S. Grade A Fancy, stamped on the packages. This label suggests guaranteed quality, company officials believe.

The Gravem-Inglis Baking Co. has been freezing food for the past five years for restaurants, bakeries, and hospitals.

Carrier To Use Mat Service

SYRACUSE, N. Y.—A new newspaper mat service containing 27 advertisements for use by Carrier Corp. dealers in advertising the company's new food freezers is being distributed through the Carrier dealer sales organization.

The mat service makes available 27 different advertisements in five different sizes, complete with illustrations and copy.

for SULFUR DIOXIDE and METHYL CHLORIDE

See Your ANSUL WHOLESALER

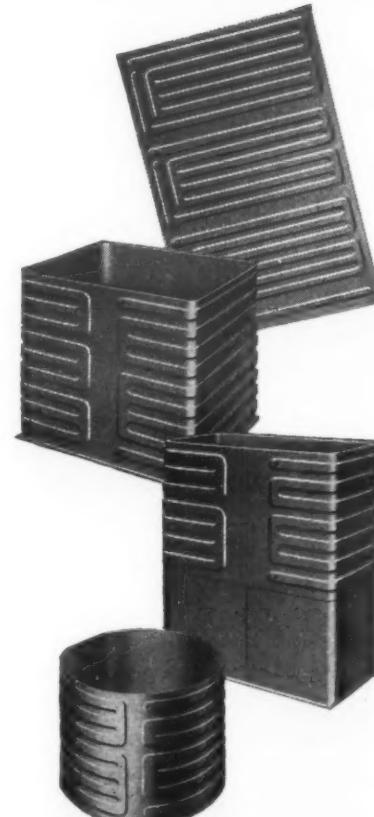
These Ansul Refrigerants have a long record for DRYNESS, PURITY and DEDICABILITY. You will like Ansul's friendly service.

*REG. U. S. PAT. OFF.
ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION
MARINETTE, WISCONSIN
Distributors for Kinetic's "Freon-11," "Freon-12," "Freon-21," "Freon-22" and "Freon-113"

Freon
Condensers and Coolers
designed and built QUICKLY.
Speed in emergencies, retubing coolers
and condensers of any kind. We design,
build, retube or repair anything
with tubes. Service 24 hours a day.
Condenser Service & Engineering Co., Inc.
Phones: REctor 2-9360 HOboken 3-4425



PIONEERS



STANGARD'S long years of experience in the refrigerating field plus their constant efforts for the betterment of low temperature equipment has resulted in their Prime Surface* Cold Plates. This plate...known for its uniform temperatures...faster pull-down...low first cost...economical performance...and trouble-free operation...makes for the highest degree of refrigerating efficiency.

The results of Stangard's pioneering will benefit you—take advantage of it!

Whether for locker plants...display cases...food counters...soda fountains...trucks...liquid coolers...ice cream cabinets...farm milk coolers...farm freeze cabinets...frosted food refrigerators...beverage coolers...rivet chillers...or low temperature test rooms...it pays to specify Stangard Prime Surface Cold Plates!

THE STANGARD-DICKERSON CORPORATION

46-76 Oliver Street, Newark 5, N. J.

*No intermediate factor between refrigerant and contact surface.

LITTLE "STAN,"
THE STANGARD MAN

STANGARD PRIME SURFACE COLD PLATES

STANGARD KNOWS REFRIGERATION



INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

I believe that the average person in this country can be awakened to his responsibility for remaking the United States into the kind of a country that it was, if those of us who have neglected our civic responsibilities will begin to take a responsible part in the carrying out of such a program.

You and I and others like us will have to express our thinking to our elected government representatives on vital issues. We will also have to learn to understand the fundamentals of an economic system which is free and of the private enterprise type as against the totalitarian type of system. We will have to help others to understand that ownership of capital is of less importance than is its use. Capital itself is of no use except as it works to create jobs and for the production and distribution of things which people do use and enjoy. Too many people are being misled into thinking that prosperity and happiness are to be had through handouts rather than creative work made possible by the profit incentive of free enterprise. They are being blindly led by selfish leaders like those who have wrecked so many other nations.

Our immediate problem is to get a start back to a balance between so-called capital and labor through the signing of the Case Bill by the President. Ask him by wire to sign the bill. Ask your friends to wire him. **HE IS YOUR PRESIDENT AND RESPONSIBLE TO YOU.**

W. J. STELPFLUG,
Vice President in
Charge of Sales

Change the Rules

Box 652, Chico, Calif.

Editor:

During the recent weeks I have read your editorials with a great deal of interest. They certainly contain a great deal of clear logic. Am writing the following to you as I know you will know what, if anything, to do with it.

In recent months I have heard a great deal about this minority rule in Congress. If this is all true then what chance has our Congress to give us the legislation which we want? The only answer anyone seems to have is that nothing can be done because the Rules Committee and others have everything sewed up in the House and the filibuster can control the Senate. These appear to be a couple of monsters which no one can control.

There are a few gaps in the logic of all this which I fail to comprehend. However, I have not gone far enough into the realm of higher mathematics as yet to obtain five by adding two and two. Have delved somewhat into the geometry of the fourth dimension and a little on relativity but failed to get the answer to it here. I should, also, like very much for some brilliant young student to find the error in the following paragraphs.

We have a House of Representatives of more than four hundred men and a Senate of 96 men who are elected by popular vote of the people of the several states and districts of our country for the purpose of making laws as they become necessary and repealing them when they become obsolete. These men are elected and paid by us for this job. All of these men must to some extent at least be leaders of some sort. There should at least be a little initiative among some of them. To see the majority of these men who are selected by us to represent us

to permit a small minority stand in their way and prevent them from doing their job is absurd.

The Constitution creates the Congress as a body of men to represent the People for legislation, states the powers and gives a few limitations of Congress, and gives a very broad field for the manner in which this is done. It states in paragraph 2, section 5, article 1 that, "each house may determine the rules of its proceedings." As I understand it the Houses of Congress are understood as groups of men not places.

The present situation seems to be that the rules which each House has set up for itself have become so strong that under the rules, it has become practically impossible for its members to do anything about changing them. Was this the intent of the Constitution? Does not the Constitution give the majority the right to make, repeal, and change its own rules of proceedings? Does the Constitution set down any rules as to how or where a majority of its members may make or break its rules of proceedings? Is there any other power other than the Constitution which can tell Congress what it can and cannot do and how it may and may not do it? Now, may I ask, what is to stop a majority of either House from drafting a set of rules for procedure, amending and changing the present rules to the desires of the majority, and without submitting it to the regular channels, signing their names to it, and turning the document over to the speaker saying we demand that it be done this way? Who could stop them? It seems to me that the Constitution gives them the right and the obligation to do this when it becomes necessary. Does not the Constitution make it the obligation of the members of the Houses to make legislation by majority? Does this not obligate the members to use any means at their disposal to carry out their work in this manner? Also; what is to prevent a majority of both houses from affixing their signatures to a piece of legislation and submitting it to the President for signature without it going through the customary worn out and plugged channels? Who could stop them?

All I hear is, this and that can't be done, there is no way to do it. It seems to me there is a road a mile wide. Is there anyone in Washington who can drive?

Radical? Yes? But, so what?

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Permanent Positions

Box 1997, Air Conditioning & Refrigeration News

Tired of Politicians

C. M. Quarter Circle Ranch
Kalispell, Mont.

Editor:

My hat is off to you in your brilliant "What's the Matter with America?" editorial, so awful in its lucid logic, language, and truth.

I'm tired of politicians who run around like strange dogs, smelling each others' behinds, afraid ever to pounce on any wrong issue. The curse of today is the intolerant and intolerable who run around claiming themselves the wise when they are so foolish. They enjoy the flappings of their leftwings which have no sustaining surface. Men who never met a payroll are set above business. Leaders who never worked are in command of labor. Theorists scarcely out of college and daring to say they can doctor because they have a degree are assuming to teach the Alpine climbers from the level of their kindergarten training. The going world is coming under the control of the ignorant bigots whose emotional confusions in insistence upon change are mistaken for progress. Thus the Soviet, more terrible than any czardom, is called the enlightened government, and this country bends its shoulders to the wheel to help a pseudonym that has connived far worse than Hitler.

Sure, I've written my senator and congressman—but what the hell. I propose that it again become fashionable to rare up on my hind legs and pounce. These "enlightened" outlaws are yearlings that have to be whiped. They have got to be taught how to rein properly. We're pro-

ceeding on the basis that the unbroke colt should teach the seasoned rider how to perform. Ridiculous, past all absurdity.

The genesis of this total error has myriad sources, all of which seem to boil down to the fact that the solid, dependable, progressive thinker and editor scarcely dare longer call his soul his own. I think the unrealities of Hollywood had something to do with it. I believe the insincerities of advertising had something to do with it. I am certain that the modern enthusiasm for steered propaganda and promotion has much to do with it. I am convinced that angling, timing, shrewd manipulations of the public mind by subservient press, pulpit, and radio has something to do with it. And I am sure that the impersonal, inept, and cowardly attitude of the legal departments of some industries has played its part, either telling management what not to say or telling it what to say in such cold and inhuman manner as to damage the milk of human kindness.

Further, I am sure that our public relations, industrial relations, political relations, international relations are now framed on the basis that the individual will get the tarred stick who dares to assert that his soul and his beliefs are his own. Only the ignorant and the bigoted and the malcontents dare mouth! And we are in the power of the articulate minorities whose motivations are emotional and who are playing to the grandstands, not for any fundamental belief in the rightness of their cause, but because they have at last been given the chance to sound off, show off, blab off. Deny

the public press to these pseudo-progressives and they would wither of chagrin. They find great ego, great compensation, great pleasure in their bloated importance. And no one should stand by to prick them with a pin because it might hurt their feelings.

They have got to be made to fear the consequences of their tomfoolery. The only thing they can respect is fear. That ignorant byssiter of life who said that the only thing we have to fear is fear itself was right . . . but in the opposite sense from what he meant it. Armament is fear, balance of power is fear. Parental discipline is fear. The crack of a whip is fear. Writing to one's Congressman is fear, if enough do it. And the only thing these disorganizers of the forward march will ever appreciate is bald, livid, punishing fear. The new order and the new deal needs to be whip broke . . . and pronto!

Again, my appreciation. I'm proud of you among American editors.

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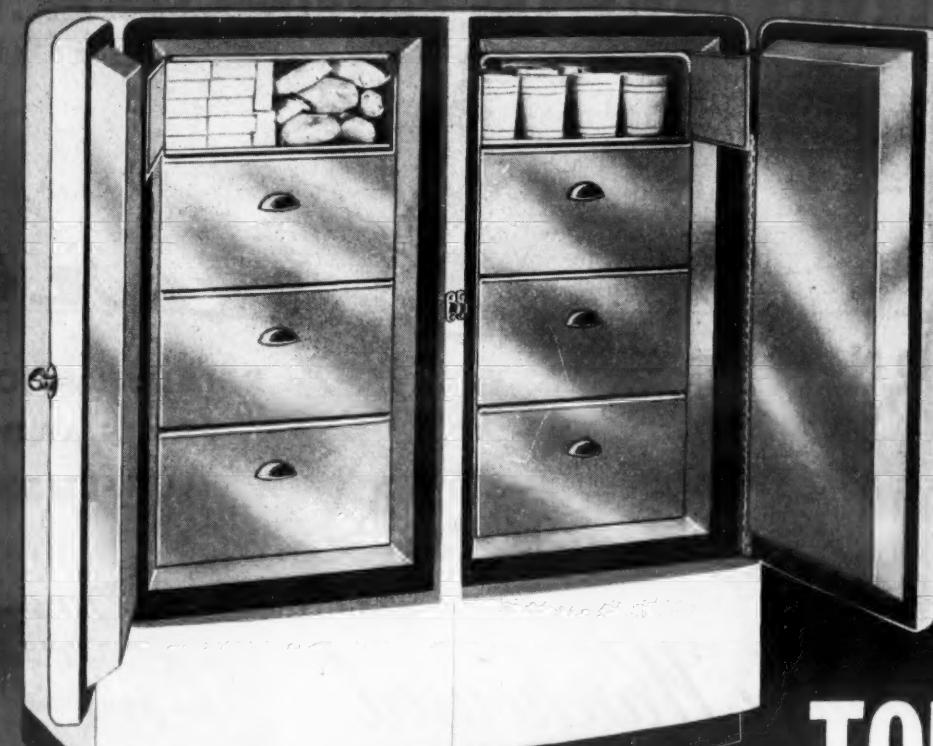
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Desirable Design, Installation Factors For Package Conditioners Are Outlined

ST. PAUL — Don't oversell or undersell a package air conditioner if you wish to achieve quality in an air conditioning installation, emphasized Robert L. Jones of Airtemp Division, Chrysler Corp., who discussed "Quality Application Practices in the Packaged Air Conditioner Field" during the symposium on air conditioning held by the American Society of Refrigerating Engineers at its thirty-third spring meeting here recently.

Seven general rules for package unit salesmen and installers were outlined by Mr. Jones as follows:

- (1) Use well designed equipment made by reputable manufacturers.
- (2) Follow manufacturers' advice.
- (3) Prepare a thorough analysis of job requirements.
- (4) Make a proper selection of equipment as to load and characteristics.
- (5) Be fair and honest with customer and dealer.
- (6) Check utility services and drains completely to insure adequacy.
- (7) Use common sense.

"In packaged air conditioners the quality of an installation is dependent upon design as well as actual field installation," declared Mr. Jones. "There can be no sharp line of demarcation since the designer must do part of the application work in his original concept of the unit. . . .

"Good industry practice dictates that a room air conditioner or a self-contained air conditioner must have means for air circulation, ven-

tilation, air cleaning, cooling, and dehumidification. Control of temperature is included in larger self-contained units, but may be optional in smaller room units. A unit, however, should incorporate means for the basic functions as outlined above."

An important consideration in the design of package conditioners is the maintenance of low noise levels, since the units are usually placed in or adjacent to the conditioned space, points out Mr. Jones. There is, however, no positive definition of what constitutes a noisy conditioner because individuals seem to react differently to different types of sounds.

'Annoyance' Factor Varies

The intensity as measured by sound meters has little correlation with annoyance of people by noise in air conditioners. No hard and fast rule can be made, but a factory-made unit should be subject, before release for sale, to an impartial group for reaction as to noise annoyance, and the designer should incorporate such changes as are feasible so as to make the unit satisfactory to the majority."

Citing the standards established for self-contained conditioners of room and larger sizes, Mr. Jones pointed out that "to be within the bounds of good practice, the designer should be certain that the unit can and will withstand peak operation conditions and conditions over peak for short duration without failure or

without causing damage to other furnishings."

With regard to the dehumidification function of an air conditioner, Mr. Jones pointed out that "complete re-evaporation of the moisture and rejection to the outside air is essential" with air cooled units. The installer should also make certain that the discharged air is not carrying water outside which may blow back against the building and cause stains or damage, he said.

Moisture Must Be Removed

"In the case of water-cooled units, adequate provision for removing the condensed moisture to a closed drain system is needed. In the latter units, an outlet which will carry water to the drain in the event of failure of condenser pipes or fittings is also required in a quality unit."

"Although ventilation and cleaning are both mentioned in the definitions of air conditioning units, it is possible, but certainly not desirable, to design units which provide for filtering only return air from the conditioned space. Where ductwork is required for outside air as in some larger self-contained units, the responsibility for providing filters for outside air rests in the hands of the field application engineer. In room air conditioners, the responsibility is the designer's."

With the aid of data supplied by the manufacturer, it should not be too difficult to size package equipment to the cooling load, believes Mr. Jones. He pointed out, however, that different elements must be considered in the application of air and water-cooled conditioners.

If air-cooled units are located in a window or in front of a window, they will receive and discharge outside air for the condenser close to the window and to the outside of the building.

Sun Rays Cut Capacity

"When possible, this type of unit should be located in a window in the north or east exposure to avoid the more severe radiant effect of the sun from other directions. There are actual cases where a unit which would run satisfactorily in a laboratory with 115° F. ambient air, when placed in a window with western exposure and close to an adjacent lower roof stopped on overload cutouts with only 95° F. ambient air. . . .

"Condenser air drawn from closely confined spaces or area-ways without an adequate supply of fresh air will not be satisfactory. It must be remembered that high condenser pressures, even though they do not necessarily stop the unit on overload cut-outs, will reduce capacity and increase power requirements. For larger self-contained air conditioners with ductwork, the return air from the conditioned space should not be taken from kitchens or lavatory rooms," declared Mr. Jones.

The application engineer is responsible for checking electrical service to the unit to insure there being adequate wiring and fuses. It is necessary to observe power company

limitations, and good practice in line with the National Electrical Code should be followed, according to Mr. Jones.

With water-cooled units, it is essential that the application engineer make certain that there is an adequate supply of condenser water of the proper pressure, and further, that drain facilities are likewise adequate.

"The control of temperature and humidity which is associated with large central station air conditioning as an essential is not handled in exactly the same way on packaged air conditioners," stated Mr. Jones. "The latter units are not built in an infinite range of sizes. They are usually designed to utilize certain sizes of motors with the capacity increments in proportion."

"Room air conditioners for window installations are usually provided with manual controls to turn on or off the fan, or to provide cooling. The amount of outside air for ventilation is usually manually adjustable. Installations of this type are made in homes or offices where the load ratio of sensible to latent or to total is usually within certain limits," he commented.

Control Characteristics

"The units are designed for an average ratio of sensible to total capacity which will match most of the average installations closely enough to provide conditions within the summer comfort zone under loads approaching peak design temperatures outside. Further control of humidity is seldom used on this-type unit. Temperature control can be added to most of these types."

Temperature control is generally supplied with larger self-contained units, while humidity control is effected in about the same manner as with smaller room conditioners, according to Mr. Jones.

"On the larger sizes, the rate of air circulation can be changed within certain limits to alter the sensible-to-total ratio. This, however, is a fixed setting and is not usually employed as a means of control responsive to room conditions."

"Another method of control which may be used is the use of a thermostat and a humidistat in parallel, arranged so that both must be satisfied before the unit is stopped. Excessive lowering of the dry bulb in the conditioned space may be prevented by manual shutdown or by another limiting thermostat."

Avoiding Misrepresentation

"The application engineer should consider the inherent characteristics of self-contained units so that unintentional misrepresentation will not be made as to what conditions will be maintained," he emphasized.

"Independent control of humidity and temperature are not inherent in most standard single self-contained air conditioner installations. Units can and have been built with added equipment such as heating coils which enable independent control of temperature and humidity."

"The foregoing discussion indicates the necessity for application engineers to analyze the conditions of load in the jobs and to exercise judgment in selection of equipment, realizing that the designers have built into the unit certain capacities and characteristics."

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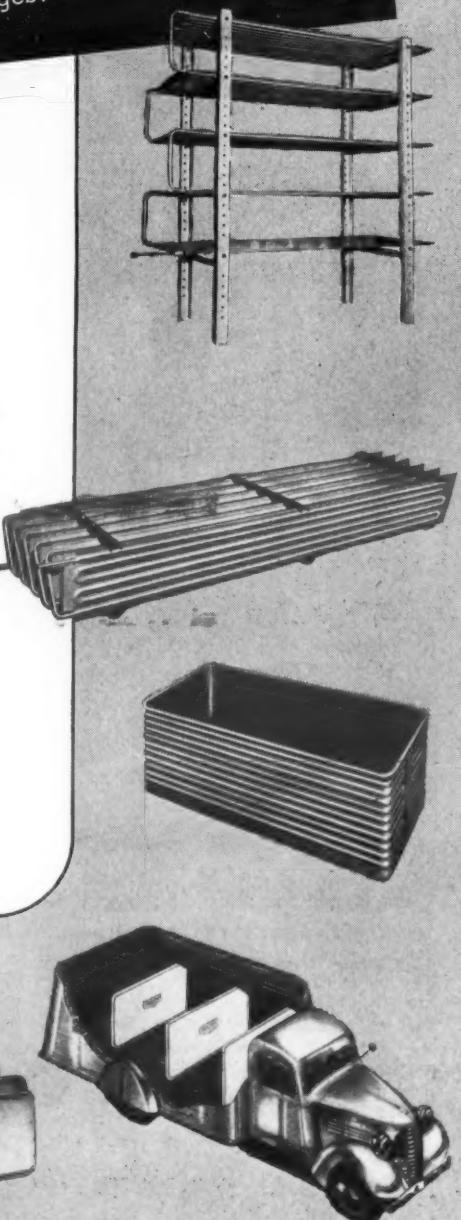
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Surplus Property Disposal

TRYING to get rid of some \$35 billion worth of government-owned surplus-property merchandise is a task which is proving to be a terrible complexity. It's a headache which no king-size bottle of aspirin can cure.

To begin: A government-controlled disposal agency, which is neither a merchandising nor a liquidating organization, is supposed to govern the distribution of this gigantic stockpile of unused war goods. It is subject to all the laws and practices which govern the actions of regular government bureaus. Yet, it is asked to do its work quickly. Because this new agency bears little similarity to older governmental bureaus, it turns out that the customary rules which standard U. S. agencies follow are not at all well adapted to the project in question.

This surplus property selling agency exercises little control over the quality, quantity, or the place-of-supply of the articles assigned. Nevertheless, it is authorized to urge the holding agencies to release extremely scarce supplies.

Inasmuch as a number of conflicting purposes have underlain the writing of the act under which this sadly-beset agency operates, we know that it lacks power to demand either a reasonable remuneration for materials sold, or to step up the speed of the disposal process.

The act sets up 20 objectives which conflict and overlap. As a result, sales lead through strange and uncharted territory toward an undetermined destination.

With some 200,000 federal, state, and local agencies having a prior claim before goods are offered for sale to the general public--this, in addition to the nebulously-defined veterans' preference--the administration becomes exceedingly complex.

Because the veterans' purchases naturally come in small amounts, the government disposal agency assumes a position similar to that of a retail business, at one point. But the federal, state, county, and city bidders want to buy in these excess stockpiles in relatively large amounts. What prices can be established, equitably, under these confused circumstances?

Industrial plants and real estate constitute about half of the \$35 billion surplus. Of the remaining \$15 billion, unusable planes compose \$4½ billion. And, of the \$10 billion left, 30% of these goods have no non-military use. Thus, actual civilian commodities available for sale amount to about \$7 billion.

Up to the present time, some \$12 billion of war-made items have been declared surplus. About \$1 billion worth of this sum represents consumers' goods, and some \$2 billions represent capital goods. The balance includes real estate, outmoded planes, and spare parts for motive equipment.

Congress's stipulation that the holding agency cannot do its own selling, but must first transfer the merchandise to the selling agency, results in the creation of a bottleneck, actually.

Further complications arise from the strange stock-keeping methods employed by military organizations. The latter make no differentiation in the classification of a tool, regardless of its size, design, or purpose. Inasmuch as various types of tools may all bear the same stock number, the Army classifications are of no use to a surplus-items disposing agency. The latter must view the goods, and take a separate inventory.

Having undergone several reorganizations during its existence, the surplus-property selling agency is now known as the War Assets Administration, as it was christened March 25, 1946. At that time, the total acquisition cost of goods it had sold amounted to \$500 million, in contrast to a \$150 million total-acquisition figure for November, 1945.

Estimating the WAA's future progress from this current rate, we can safely say that it would take this neither-fowl-nor-fish-nor-good-red-herring merchandising organization at least six years to sell out its present supply of stock.

In the meantime, our nation's taxpayers take the rap again.

Purchases of Bendix Washers to Be Financed By Two Agencies

SOUTH BEND, Ind.—National "time payment" credit coverage for all purchasers of the Bendix automatic Home Laundry now is available through two agencies, the Bank of America and the Commercial Credit Co., according to W. J. Reuscher, vice president and treasurer of Bendix Home Appliances, Inc.

A finance plan is offered for any Bendix distributor, dealer, or consumer by the Bank of America's "Timeplan" in Oregon, California, Idaho, Utah, Nevada, Arizona, New Mexico, Colorado, Wyoming, Montana, and part of Texas. A similar setup with the Commercial Credit Co., as prewar, is operative in the 37 other states.

Both plans provide complete credit arrangements for distributors and dealers, including "floor plans" of merchandise. For consumer financing there are full, limited, or non-recourse dealer plans at rates at least competitive with any other finance company.

In each setup, variations are permissible to meet purchasers' individual needs. These may include life insurance for consumers to assure completion of payments in the event of death or casualty insurance covering certain damage to the washing machine.

Two new Bendix home appliances, an automatic dryer and an automatic ironer, may be financed similarly when they are ready for the markets late this summer, Mr. Reuscher said.

Store Sets Up Separate Center for Appliances

ST. PAUL—The Bannon Department Store has followed the general trend toward "getting home appliances away from the main store" by construction of its new \$60,000 Electrical Appliance Center Adjacent to the main building.

The new store, which features model kitchens and model laundries, has a 25 ft. front of postless plate glass for easy visibility, and is 100 ft. deep. Everything shown can be seen at once, with no obstructing partitions of any kind. Arches connect the appliance center with the main store.

There will be an outside sales crew on full time duty, regular daily cooking school demonstrations, and a weekly class on how to use the home freezer efficiently.

In Syracuse Even Jewelers Sell Appliances

SYRACUSE, N. Y.—Wilson's Leading Jewelers, Inc., here has opened a new appliance shop next door to its South Salina St. headquarters.

John D. Wilson, president, and Jerome M. Wilson, vice president, recently acquired the Wilson Building which houses their shops.

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Match Folders in Every Cigarette Machine Advertise Missouri Dealer's Appliances

COLUMBIA, Mo.—Claimed as the largest appliance store in Missouri outside of Kansas City and St. Louis, the Missouri Home Appliance Co. opened for business here recently.

Its owner, the Missouri Store Co., plans to enter the appliance field aggressively on the theory that "the fellow with the money who sticks to the field will make a go of appliance selling."

The new location is a 49 x 80 ft. structure including basement and two stories. At a cost of \$32,000 the store was remodeled from a series of small stores and upstairs apartments. Fluorescent lighting and an air conditioning unit are to be installed.

To get the new store's name before the public, the company is sponsoring a news broadcast over the local radio station, is buying newspaper space in local papers regularly, and has recently made arrangements with

the local cigarette machine distributors to have match folders which are stamped with the name "Missouri Home Appliance Co." accompany each pack of cigarettes bought from a machine. The cigarette vending arrangement covers every cigarette machine in Columbia for a period of four months.

Clothier Announces Plan to Feature Westinghouse Line

MEMPHIS, Tenn.—Barham Clothing Co., here, one of the five stores owned in Tennessee and Alabama by Henry T. Barham, announces it will introduce a line of Westinghouse electrical appliances in the store when they become available. The stores, heretofore, have handled only clothing. Mr. Barham plans soon to open several other stores in the midsouth.

Lights! Action! Camera!

Sound Movies Will Help Chicago Firm Educate Public on Major Appliances

CHICAGO—Central Appliance & Furniture Co. here is preparing to launch a program, consisting mainly of movies, to educate the public on new major appliances, company officials have announced.

Having purchased an RCA sound projector, the firm will present movies on frozen foods, complete kitchens, laundries, television, and FM, which have been prepared by the manufacturers, to parent-teacher, church, social, and civic organizations. No charge will be made to the organization and an operator and speaker will accompany the films upon request, it was said.

The company is also planning to add a home economist to the staff to aid customers in selecting merchandise and to make demonstrations in the home after sales are completed.

Central Appliance & Furniture Co. has opened its third store in this city at 3110 W. 63rd St. This store will be managed by Ray Bradley, formerly with R. Cooper Jr., General Electric distributor here. A complete kitchen planning department will be featured.

Plans for enlarging the company's store at 2850 Central Ave. are being formulated, according to officials.

New Pineville Dealer Opens Hardware & Appliance Store

PINEVILLE, Ala.—A new hardware and appliance store has been opened here by Hill McCrary, veteran commercial refrigeration dealer. Everette Mitchell has been selected as manager, and Tom Bell, assistant manager.

SUNROC announces its new 10-gallons-per-hour WATER COOLER



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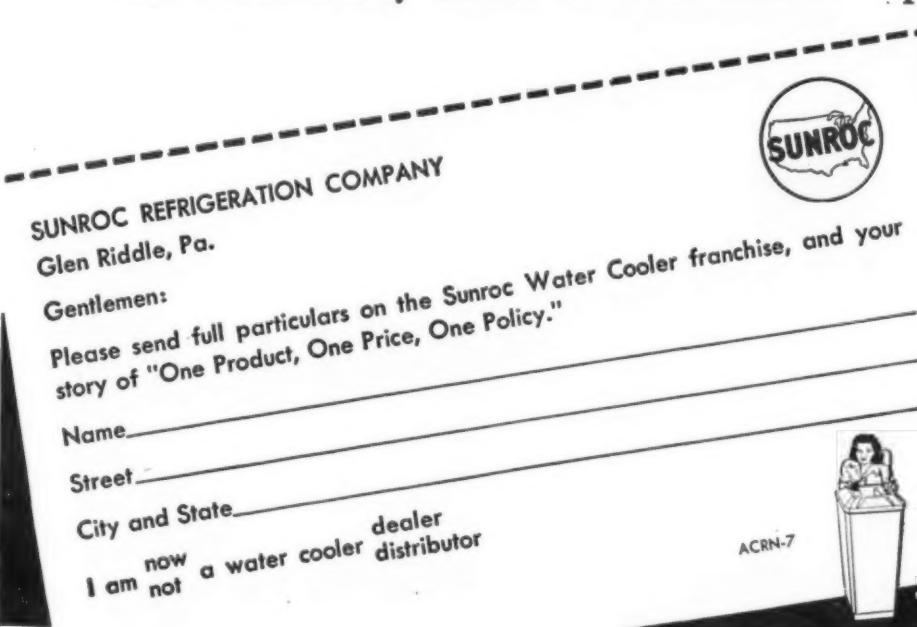
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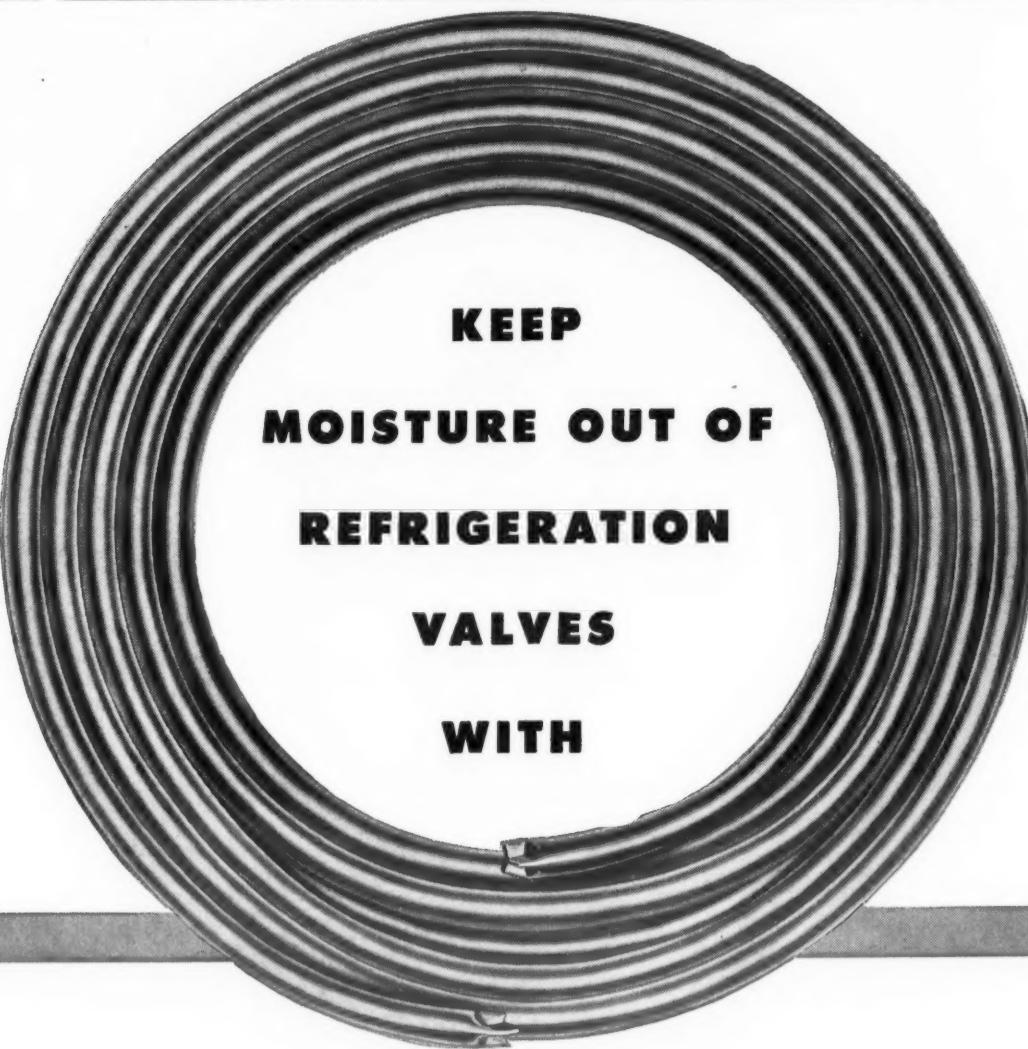
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Central Cooling Systems Often Cheaper Than Multiple Package Jobs, Contractor Contends

A 20-Ton Central System Can Cost Less to Install And Service Than 4 5-Hp. Units, He Claims

By C. Dale Mericle

DETROIT—There are numerous advantages inherent in package air conditioners, but today it's actually cheaper to install and service central station systems in many instances, contends Harry Levine, operator of Atmospheric Control Co., one of Detroit's leading air conditioning contractors.

"I have nothing against package air conditioners themselves, and I sell a lot of them," says Mr. Levine. "But when it comes to quoting on air conditioning jobs, I know from experience that a large installation involving multiple package conditioners will generally cost more than a central system of the same capacity.

Multiple Installations Okay Up to 4 Units

"Before the war and it still holds true, we generally figured that it was economical to install up to three 5-hp. package units in a job, but if there was a 20-ton cooling load to meet, a 20-ton central system would be less expensive in both first cost and maintenance than four 5-hp. machines," declared Mr. Levine. "This is even more so today because of the high cost of service."

There are several reasons for this difference in cost. Plumbing, rigging, and wiring, for example, may very well total more on a large job involving multiple package units, than the cost of installing a single large machine, he points out.

"Here's one job that we recently quoted on," Mr. Levine continued, pulling out the actual files. "Nine package units are involved, amounting to a total of 39½ tons. There is one 7½-ton unit, five 5-ton machines, two 3-ton units, and a single 1-ton conditioner.

No Central System Ever Cost \$400 a Ton

"We quoted a price of between \$16,000 and \$18,000 on the job, an average of \$400 a ton, not including the wiring. And no central system we've ever installed cost as much as \$400 a ton.

"The plumbing quotation alone, not including the installation of a water meter, which the sub-contracting plumbing firm gave us for this job, totaled \$2,300, and the rigging bill would amount to \$875.

"This particular installation is going into the three floors of a downtown bank building in Detroit. It's not feasible in this particular job to put in a central system. If we could use a single 40-ton machine, though, the plumbing bill probably wouldn't exceed \$250, exclusive of new service which would be required in either case, and the cost of rigging a 40-ton unit in the basement wouldn't run over \$100.

Installing the Units Will Cost Plenty

"As it is now, however, we'll have to get a 100-ft. crane downtown on a Sunday, take out a window on the third floor of the building to hoist the conditioners to that floor. Second floor units must be literally pulled up the stairs as elevators are not large enough. The average building around town doesn't have an elevator large enough to haul heavy package units, which means a lot of rigging and a big rigging bill."

Mr. Levine went on to cite another job comparing package and central systems. This is a 150-ton job in a seven-story building. To handle this

load 30 5-ton package conditioners would be required, scattered all over the building. It would cost the owner of the building about \$2,000 per conditioner for this air conditioning system, bringing the total cost up to \$60,000, whereas a 150-ton central system wouldn't cost more than \$54,000, contends Mr. Levine.

In addition to the savings in first cost, there will be considerable savings in maintenance and service, and still other cost factors to be considered, he said.

What's Involved In A Central System

Just what would the 150-ton central system comprise?

"In this system," explained Mr. Levine, "we'll have a 150-ton centrifugal compressor in the basement connected to a water cooler. The chilled water will be pumped to seven blower units, one being located on each floor and connected to ductwork to distribute conditioned air throughout each floor.

"The blower units with water coils will be located directly in line, making the running of piping from the water cooler up to the units quite simple and comparatively inexpensive. Down in the machinery room we'll need a 150-hp. electric motor and starter, and one set of automatic controls. With a centrifugal compressor we won't need an expansion valve. For the seven blower units, there'll be seven blower motors and seven starters.

And What's Involved In 30 Unit Conditioners

"Now let's compare this equipment with the equipment involved in 30 package machines. There are 30 $\frac{1}{2}$ -hp. single phase motors, 30 5-hp. motors, 30 5-hp. magnetic starters, 30 pressure controls, 30 expansion valves, 30 water regulators, 30 solenoid valves, 30 thermostats, 30 water lines of $\frac{3}{4}$ in. diameter, and 30 1 in. drain lines.

"The service problem alone is apt to require a full-time maintenance man for these 30 conditioners, particularly after the first two years," contends Mr. Levine.

"For example, the seven motors needed to drive the blowers on the seven units in the central station system would all be three-phase squirrel cage type motors. These motors generally run for years without requiring any servicing. The only attention they'll need is occasional (Concluded on next page)

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Package Units May Waste Valuable Store Floor Space, Says Contractor

(Concluded from preceding page)
sional oiling. They'll last at least 10 or 15 years.

"But take those 30 1/2-hp. motors driving the blowers on the 30 package conditioners. These are single-phase motors, which means there is going to be a lot of service calls on these motors alone, at least compared with integral squirrel cage motors," declared Mr. Levine.

"There are going to be numerous service calls on these package units. There are on any air conditioning system. Every spring and every fall, for example, the units will have to be started up and shut down, and there'll probably be a few—two or three—calls during the summer season. The same applies to both central systems and package units.

30 Times As Many Service Calls Seen

"But assuming that there will be the same number of service calls on each package unit as on the central system, we'll find that there will be 30 times as many calls if 30 package units are installed as for the single 150-ton central system. There should be a yearly minimum of 320 service calls, probably, so the building owner or tenant will have to hire a full-time refrigeration maintenance man," says Mr. Levine.

Savings in installed cost through putting in a central system instead of package units amounts to an increasingly large sum as the size of the air conditioning system gets into really large tonnage, he pointed out.

A 300-ton central system, for example, should not cost more than \$75,000 at the outside, which is equal to about \$250 a ton, believes Mr. Levine. Installation of 60 5-hp. package units, however, would cost considerably more. Figuring on the basis of \$1,800 installed cost per unit, this would total \$108,000.

At 'Bargain' Prices Cost Would Be High

It might be possible to reduce this figure to \$1,600 per unit through discounts for quantity purchases, but such discounts are not available under present conditions and some savings in installation expenses. Even then this would mean a total cost of \$96,000, which is \$21,000 more than the estimated cost of a central system of the same total tonnage.

There is still another factor to be considered in determining whether a central system or the equivalent tonnage of individual package units should be installed, he said.

Referring again to the 150-ton system previously mentioned, Mr. Levine points out that 30 package units will require considerable more floor space than a central system supplying seven chilled water blower units.

"Floor space is at a premium in most downtown locations," he em-

phasizes. "In this particular seven-story building, the tenants are paying a very high rental. This means that every square foot of floor space is extremely costly. The average store owner will hesitate about devoting too much of that expensive floor space to package air conditioners when a central system would require much less space."

"Another problem is presented by package units in a large store, too," continued Mr. Levine. "Package units will in nearly all instances have to be placed directly on the sales floor. This isn't too good in a ladies' dress department, for example. A service man who comes in to repair the unit, adding oil or refrigerant, is apt to create a very objectionable condition."

Also in favor of central systems is the possibility of taking advantage of diversification of loads in the various departments, says Mr. Levine. The blower unit is generally large enough to handle the maximum load on the floor. The compressor, however, need not generally be sized for more than 75% of the total maximum load, as all floors almost never have maximum loads at one time.

Central System Provides Winter Heating Easier

"Still another major consideration is that by the mere addition of a conversion heater and a single automatic steam valve in the basement, the system can be used for winter heating, making the investment pay out 12 months of the year instead of for a cooling season only."

"Contrast this with the probable cost of 30 steam coils with necessary controls and piping if package units are used."

Mr. Levine repeats, however, that he is not against package units per se. In the right place, he says, they're ideal. And he also favors the larger package conditioners. One or two of these on a floor, connected to ductwork, do a very good job, he claims.



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Here's the Other Side of the Controversy: Clothier Installs 10 Package Conditioners

'We Are Confident That Units Will Be Quite Satisfactory'—Owner

COVINGTON, Ky.—To provide relief from inside temperatures that frequently exceeded 100° F., H. Ellerman & Son, Inc., men's and boys' clothiers here, installed 10 Chrysler Airtemp "packaged" air conditioners recently.

Shown by air conditioning engineers how the "packaged" units could be installed without using overhead ducts which would necessitate altering a large number of store fixtures, Ellerman & Sons ordered the units.

Located on the corner of Madison Ave. and Pike St., the four-story Ellerman building has a southern exposure which is practically all glass and exposed to the rays of the sun from morning to night.

After unsuccessfully using fans and ventilation to relieve the extreme heat, the Ellerman brothers, Bernard, Robert, and Richard, decided on air conditioning to make the store comfortable for customers. Air conditioning would keep the store cool and make it an inviting place to shop, they believed. It would also keep the stock clean because all the air in the building would be filtered. During the winter, the same units could be used to heat the store.



Here is one of the 10 package air conditioners installed in the clothing store of H. Ellerman & Sons, Covington, Ky. This 5-hp. unit is recessed about 6 in. into a pilaster between two windows.

Two 5-SCA and one 3-SCD models were located in the basement to serve the first floor through ductwork. A like number of units was installed on both the second and third floors and located in the space they serve.

Each of the 5-SCA units on the second and third floor sales rooms is recessed about 6 in. into a pilaster and is in plainview of store customers. Each of the 3-SCD units is located behind a three-way mirror and discharges conditioned air directly into the room over the top of the mirror.

One 5-SCA "packaged" air conditioner serves a work area on the fourth floor of the store building.

In a letter to Chrysler Airtemp, B. H. Ellerman, president of the firm, declared: "From the tests to date, we are confident that the units installed will be quite satisfactory, but it is a relief to know that if a little additional cooling is necessary in the future, all that will be necessary is to add an additional unit or two."

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'Elbow Grease' Basic In Controlling Growth of Microbes on Food In Refrigerated Storage

ST. PAUL—Despite the introduction of new cleaning compounds and other agents capable of controlling and destroying microbes on foods stored in refrigerated warehouses or cold rooms, the basic solution to this problem is still chiefly a matter of sweeping and scrubbing, according to W. L. Mallmann, who discussed the "Control of Microorganisms in Food Storage Rooms" at the recent spring meeting of the American Society of Refrigerating Engineers here.

Aided by a grant from the Refrigeration Research Foundation, Mr. Mallmann and E. S. Churchill have been studying this problem at the Michigan Agricultural Experiment Station at East Lansing, Mich.

Role of Refrigeration

"The objective of refrigerated storage of perishable foods is purely an attempt to extend the storage life of the produce," points out Mr. Mallmann. "It is true that foods with relatively high microbial populations can be held for considerable periods without too great a loss in quality if held at relatively low temperatures.

"However, every cold storage house operator has had unfortunate experiences when products were held too long. The loss in quality may have been due to the acceptance of products heavily contaminated at the time of storage, to placing the foods in heavily contaminated storage rooms, or perhaps both."

Although the operator cannot control the conditions which may lead to contamination of food products before they are brought into the plant, he can keep his own plant free of contamination, suggests Mr. Mallmann. If the storage rooms are visibly contaminated, the operator would have little defense in the event complaints are made regarding the contamination of food stored in his establishment.

The first prerequisite in the control of microorganisms is the maintenance of clean environments," emphasizes Mr. Mallmann. "There is no substitute for cleanliness. There are no short-cuts. We know of no compound that can be applied to a dirty surface which will destroy all microorganisms.

Walls Must Be Clean

"To demonstrate this fact a good sanitizer was applied liberally to a dirty wall in a food handling plant. This wall had a bacterial population of 28,000,000 on a 2-in. square. Five minutes after the treatment the wall still had a bacteria count of 11,000,000. Although the contamination had been lessened somewhat, the wall was still heavily contaminated. "A food product entering this storage room had a relatively low surface bacteria count but in 48 hours the product had a count of 150,000 in a 2-in. square," continued Mr. Mallmann. "Air examinations

showed an extremely high bacteria count. It was quite evident that even though multiplication of bacteria might be kept to a low rate by low temperature, still the product was acquiring a high count that would lessen materially its keeping quality after it left the storage room; and if kept for a long period in storage, its storage life would be considerably shorter than if the food had been stored in a room relatively free of contamination."

Ideal Method of Control

Declaring that "the ideal method of controlling contamination of rooms would be an air distribution of the killing agent whereby organisms in the air as well as those on the surfaces would be destroyed," Mr. Mallmann outlined results of tests made with ultraviolet rays, ozone, glycol, and carbon dioxide.

"Germicidal lamps with a wave band of 2537 Angstrom units offer a novel means of destroying microorganisms," he said. "These lamps are particularly interesting because they are practically devoid of wave bands causing irritation to the skin and ozone formation. . . . These lamps are being widely used for the control of microorganisms in the air and on surfaces. In many applications they are doing a splendid job; however, in some applications for which they are being sold they have only limited value."

Several tests employing ultraviolet rays on beef with and without refrigeration were cited by Mr. Mallmann, who concluded that "there is no question but that the microorganisms on areas of the meat exposed to the ultraviolet rays are reduced in number or, at least, their reproduction is suppressed.

Effect of Ultraviolet

"However, a considerable portion of the carcass is in the shadows and thus receives no radiation of light. To determine the influence of the lamps on the control of microorganisms in the shadowed areas of the meat, metal shields were installed so that no direct rays would strike the surface of the quarter of beef and at the same time not hinder circulation of air over the lamps.

Although only three sets of experiments were run, the results all showed a marked suppression of bacteria in the light-treated refrigerator. The numbers of bacteria were similar to those of the experiments where direct irradiation was used," reported Mr. Mallmann.

Tests made with an ozone machine which supplied approximately 0.1 p.p.m. (parts per million) of ozone to the refrigerator, indicated the ozone had about the same effect on microbes as the shielded ultraviolet ray lamps, he said.

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"Experiments were made to determine the effectiveness of propylene glycol against molds and bacteria common to cold storage rooms. Two methods of application were used, namely atomized sprays and vaporization by heat. . . . It was found that vegetative cells of spore-forming bacteria were reduced in numbers but the spores of these organisms were not affected. . . . The fact that spores were unaffected would appear to make these compounds of little value in controlling the microbial contamination of cold storage and food preparation rooms.

Spray Tests Poor

"Water suspensions of various disinfectants were also sprayed into the air in an attempt to destroy bacteria and molds suspended in the air. None of the compounds used that might be acceptable for the treatment of food rooms gave satisfactory results. All disinfectants with low phenol coefficients gave results comparable to spraying water alone.

"The results of these studies would indicate that at the present time there are no disinfectants that can be introduced into the air either as vapors or sprays that will destroy microorganisms suspended in the air," he declared.

Studies made of the effectiveness of carbon dioxide in destroying or limiting the growth of microbes proved favorable, according to Mr. Mallmann. Tests using concentrations of 2.5%, 5%, and 10% were run off, leading to the conclusion that concentrations as low as 2.5% have a "marked effect in reducing microbial multiplication," he declared. At concentrations of 10% there appears to be some bactericidal action.

For direct surface disinfection, the widely used hypochlorite compounds generally prove fairly satisfactory, although they have no residual effect, Mr. Mallmann said.

New Compounds Okay

"A new series of compounds called the quaternary ammonium chloride compounds have appeared on the market in recent years," he continued. "These compounds have high germicidal and bacteriostatic values. They are widely used as skin and wound antiseptics and they have also been widely used as general disinfectants.

"The results reported in many applications of these disinfectants have been very satisfactory. These compounds are toxic in 10% concentrations but in use-dilution of 1-1,000 or greater they are relatively non-toxic."

Summarizing these studies, Mr. Mallmann emphasizes that "the data show that there is no one procedure that is satisfactory for all purposes. Each sanitizing procedure must be carefully analyzed to determine the manner of procedure and the type of agent which will give the desired results.

Best Methods Vary

"It is difficult to set down in writing specifications for each situation because each situation may vary sufficiently to require a variation in control procedure. For example, if air-borne contamination is the sole source of contamination in a given situation then ultraviolet ray lamps may serve adequately. If we are to control the development of microorganisms on the surface of beef during short-time storage then either ultraviolet light or carbon dioxide atmosphere may answer the purpose effectively.

"If microorganisms are contaminating food produce through contacts with utensils, table surfaces, etc., then a chemical sanitizer is indicated. Ultraviolet light, glycol vapors, or carbon dioxide would have little value. If contamination on wall and floor surfaces is a source of trouble, then a chemical agent, preferably with residual activity, should be selected."

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Philadelphia School Adds Refrigeration Service Training to Curriculum

PHILADELPHIA — Refrigeration and oil burner service training, initiated as a war time measure by the Electrical Association of Philadelphia, has been added to the regular curriculum of the Murrell Dobbins Vocational School here.

Approved by the U. S. Veterans Administration and recognized by the G. I. Bill of Rights, the courses have attracted 102 ex-servicemen, according to the bulletin. Sixty-eight veterans enrolled in the refrigeration service training course and 34 signed up for the oil burner course.

Both courses last two and a half years and are divided into five class periods per week.

In the refrigeration course, the veterans are divided into four classes under two instructors. Two classes are held from 8 a.m. to 1 p.m. and the other two from 1 p.m. to 6 p.m.

The oil burner course is divided into two sessions, one held in the morning and the other in the afternoon.

The school district of Philadelphia through the Murrell Dobbins Vocational School has cooperated with the association since 1941 in jointly sponsoring these courses.

OPA Sets Maximum Price On Victor Walk-in Cooler

HAGERSTOWN, Md.—Authorization of maximum prices for eight models of walk-in coolers and accessories manufactured by Victor Products Corp. was announced recently by OPA in Order 565, MPR 591.

The price schedule follows:

Room Type	Dis-tributors	Dealers	Con-sumers
WALK-IN COOLERS			
3" Glasswool:			
RR-1	\$ 273.60	\$ 328.32	\$ 547.20
RR-2	387.60	465.12	775.20
RR-3	500.84	601.01	1,001.68
RR-4	614.46	737.35	1,228.92
RR-5	534.66	641.59	1,069.32
RR-6	681.72	818.06	1,363.44
RR-7	828.78	994.54	1,657.56
RR-8	975.84	1,171.01	1,951.68
4" Glasswool:			
RR-1	228.00	345.60	576.00
RR-2	408.00	489.60	816.00
RR-3	527.20	632.64	1,054.40
RR-4	646.80	776.16	1,293.60
RR-5	562.80	675.36	1,125.60
RR-6	717.60	861.12	1,435.20
RR-7	872.40	1,046.88	1,744.80
RR-8	1,027.20	1,232.64	2,054.40
6" Glasswool:			
RR-1	348.00	417.60	696.00
RR-2	493.00	591.60	986.00
RR-3	637.03	764.44	1,274.06
RR-4	781.55	937.86	1,563.10
RR-5	680.05	816.06	1,360.10
RR-6	876.10	1,040.52	1,734.20
RR-7	1,054.15	1,264.98	2,108.30
RR-8	1,241.20	1,489.44	2,482.40
Base Price			
(square feet)			
1 sq. ft. 3" glasswool:	\$1.14	\$1.37	\$2.28
1 sq. ft. 4" glasswool:	1.20	1.44	2.40
1 sq. ft. 6" glasswool:	1.45	1.74	2.90
1 sq. ft. 3" corkboard:	1.55	1.86	3.10
1 sq. ft. 4" corkboard:	1.83	2.20	3.66
1 sq. ft. 6" corkboard:	2.45	2.94	4.90
Prices include hardwood floor rack and one standard 2'6" x 6' walk-in door, galvanized hardware.			
Accessories			
14" wide oak shelving:	*\$1.10	*\$1.32	*\$2.20
Meat rails with hooks:	1.40	1.68	2.80
Marine light and pilot switch:	17.50	21.00	35.00
Reach-in glass doors 30" x 30" triple glass:	30.00	36.00	60.00
Reach-in solid doors 30" x 30" insulated:	23.00	27.60	46.00
*Lineal foot.			
Panel Unit—Blower and Condensing Assembled with Housing			
Cooler No.	Combination	Distributors	Dealers
RR-1	WM 20 and 1/2 hp. unit	... \$203.15	\$ 243.78
RR-2	WM 25 and 1/2 hp. unit	242.80	291.36
RR-3	WM 35 and 1/2 hp. unit	255.80	306.96
RR-4 (2)	WM 20 and 1/2 hp. unit	406.30	487.56
RR-5	WM 45 and 1/2 hp. unit	294.60	353.52
RR-6	WM 45 and 1/2 hp. unit	294.60	353.52
RR-7 (2)	WM 25 and 1/2 hp. unit	485.60	582.72
RR-8 (2)	WM 35 and 1/2 hp. unit	511.60	613.92
Discounts, allowances, and services are to be at least as favorable as those in effect on Oct. 1, 1941. Addi-			
tion of freight and crating charges is allowed.			

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Pittsburgh Glass Develops Double-Glazed Window For Refrigerated Cabinets

PITTSBURGH—"Twindow," a new type double-glazed window insulating unit said to be applicable for reach-in coolers and frozen food cabinets, as well as air conditioning installations, has been developed here by the Pittsburgh Glass Co.

Consisting of two or more plates of glass enclosing a 1/4 in. or 1/2 in. of hermetically sealed air space, the unit utilizes hollow aluminum tubing to hold the glass plates in position, and is framed with a light-gauge stainless steel channel.

In the hermetically sealed intermediate space between the plates of glass is dead air held at atmospheric pressure, a basic principle of insulation practice. This dead air is kept dehydrated by means of a drying agent within the aluminum spacer tubing. The desiccant gains access to the hermetically sealed air through holes adjacent to the internal corners. By means of the drying agent the unit is protected against the slightest vapor diffusion and enabled to meet a wide range of atmospheric changes, it is claimed.

PROVIDES CLEAR VISION

Among Twindow's general uses is its application in industrial buildings where manufacturing processes require uniform temperature and humidity. Also, combining clear vision with insulating properties, the unit may be employed in frozen food, meat, and produce cases. On the domestic side, Pittsburgh Glass officials predict a wider use of large picture windows in modern homes if Twindow is employed. The new development will make possible larger windows with a minimum of cold down-drafts, it is claimed.

There are likewise numerous specialized applications of Twindow that have grown out of the use of the double-glazed principle in production and operation of war materials and equipment. During the war when this same principle was utilized in the design of wind tunnels and other aerodynamic testing chambers where glass would be subjected to extreme pressures, reports indicate that performance of the double glazed window was satisfactory.

WIDE RANGE OF SIZES

Present-day specially developed production processes make it possible to provide Twindow units in a wide range of sizes in any combination of straight edges as well as simple cylindrical bends within definite limitations. Units may also be provided in triple, quadruple, and multiple glazed panels.

Some of the other special glasses that can be fabricated to meet specific needs include a combination of Solex heat absorbent glass and ordinary plate glass to be used, for example, in airport towers and similar locations where direct rays of the sun pose a problem. Also, where safety against impact and exact thermal control is needed, Twindow units can be made from Hi-Test Duplate, Duolite, and Aerolite laminated safety glasses. This type unit might be used as a special observation window in industrial processes. For a higher degree of impact resistance, however, the firm recommends the use of Herculite heat-tempered glass.

Unit, 110-Volt, 60-Cycle, 1 Phase, Assembled with Housing

Unit	Distributors	Dealers	Consumers
RR-1	\$203.15	\$243.78	\$ 406.30
RR-2	242.80	291.36	485.60
RR-3	255.80	306.96	511.60
RR-4 (2)	406.30	487.56	812.60
RR-5	294.60	353.52	589.20
RR-6	294.60	353.52	589.20
RR-7 (2)	485.60	582.72	971.20
RR-8 (2)	511.60	613.92	1,023.20

Bowser Provides Complete Industrial Sub-zero Equipment

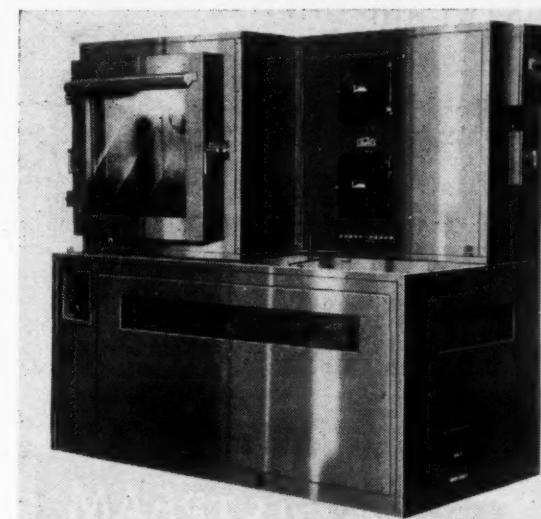
Former Kold-Hold Inventory Added to Low Temperature Testing, Processing Units

TERRYVILLE, Conn.—A new line of industrial sub-zero processing and testing equipment developed by Bowser, Inc., since it acquired the inventory of Kold-Hold Mfg. Co.'s Low Temperature Division is claimed to be "the most complete on the market today by any one manufacturer."

Produced by Bowser's Refrigeration Division here and marketed under the trade name, "Bowser-Kold-Hold," the line includes stratosphere testing units, hot and cold liquid bath units, prefabricated walk-in chambers, and production chilling equipment.

Following purchase of the Kold-Hold branch last autumn, Bowser engineers began development of new equipment "using the Kold-Hold chilling machines best suited to common cold-treating practices, plus production testing and laboratory units to simulate temperature, humidity, and altitude conditions."

Two of the Bowser-Kold-Hold products are a chilling cabinet, made in 5 and 11-cu. ft. capacities with a 14-in.-deep work compartment, and a production testing unit which provides temperatures ranging from 150° to -90° F. The latter also enables optional humidity factors and altitude simulation through vacuum control. It opens at the



Pictured at left is a Bowser-Kold-Hold laboratory testing unit capable of providing any atmospheric simulation or substratosphere condition.

front and has a rear window for observation of material being tested.

Laboratory units are supplied to specifications for any atmospheric simulation, according to the company.

E. S. Ronk, sales promotional manager of the Refrigeration Division, said that seven field representatives have been appointed and that sales and service offices have been established in New York, Washington, Chicago, and San Francisco. Distributors will be appointed through these offices, he stated.

Officers of the division include

M. J. Kennedy, general manager; T. J. Lopiccolo, chief engineer; and Col. Ralph S. Hayes, production chief.

Eagle-Picher Manual Discusses Mineral Wool as Insulation

CINCINNATI—A new, 28-page illustrated instruction manual dealing with insulation in the low temperature and cold storage fields has been issued by the Eagle-Picher Co., producer of lead, zinc, insulation, and allied products.

The booklet contains a factual presentation of the use of mineral wool for all types of cold storage and low temperature installations.

Data and application instructions pertaining to cold storage insulation are supplemented by charts and drawings.

A New LOCK A New HINGE

For
**WALK-IN
COOLERS**

NOW AVAILABLE FROM AMERICA'S QUALITY MAKER

OF COMMERCIAL REFRIGERATION HARDWARE

SPECIFICATIONS

"Husky" is a mild word for this big lock. It's engineered and built for the heaviest kind of duty. The locking principle is our patented "When it trips, it grips" mechanism. Saves door-slammimg . . . goes into action with finger-tip pressure. Then it takes hold with a constant, bulldog grip that seals the weightiest door. With all its massive power, it's a beautiful stream-lined job . . . finished in top-quality chrome that gleams like a mirror.

The reversible ball-bearing hinge is a worthy companion. Full specifications and prices on application. Order now for early delivery!

No. 4774 Reversible Automatic Lock. Forged brass handle, extruded brass bolt, stainless steel pins, case of our special zinc alloy die-cast under hydraulic pressure.

No. 3913 Reversible Strike. Pressure-cast zinc alloy base, cast brass nose. Offsets adjustable from 3/4" to 1 1/8". Overall length (lock and strike), 12 1/4".

No. 4552 Push Rod Assembly for interior operation available on order.

No. 15375 Ball Bearing Reversible Hinge of forged brass. Offsets from 1" to 1 1/4". Overall length, 12 3/4".

Manufacturing a full line of hardware for commercial refrigerators

Grand Rapids Brass Company
Division of CRAMPTON MANUFACTURING COMPANY
Grand Rapids 4, Michigan

**EVOLUTIONARY IN ENGINEERING
REVOLUTIONARY IN DESIGN**

COOLSTREAM CAPACITY CLIMBS

Rising above original estimates —
Delivering more than promised —
Coolstream Electric Water Coolers
Exceed Expectations and
Surpass Specifications

The CP-10 is delivering more
than the charted 10 gallons —
The CP-10 is breaking its own record!

Send for Catalog

THE COOLSTREAM CORPORATION
240 BUTLER ST., BROOKLYN 17, N.Y.

Refrigeration Units, Parts and Supplies

26,000 Sq. ft. of Shop and Warehouse Space

Same Day Service On Items In Stock

1946 CATALOG CANCELLED

Price increases and other conditions beyond our control make it impossible to issue a complete and up to date catalog. Therefore, we will not publish a catalog in 1946.

SERVICE PARTS COMPANY
2511 LAKE ST. MELROSE PARK, ILL.

**Campbell, Horner Head
New Perfex Branches
In Cleveland, Detroit**

MILWAUKEE—Branch offices of the Perfex Corp., manufacturer of automatic temperature controls and industrial engine radiators, have been opened in Cleveland and Detroit, the company has announced.

Charles M. Campbell, who joined Perfex in 1944 as sales engineer, heads the Cleveland branch, located at 2010 E. 102nd St. Mr. Campbell, a graduate of Purdue University in 1935, spent 10 years in sales work prior to joining Perfex.

The Detroit office, at 9545 Grand River Ave., was placed under the supervision of S. David Horner, who received his discharge from the navy as lieutenant commander just before coming to Perfex Corp. in January, 1946.

Prior to his military service, Mr. Horner was associated with the Powers Regulator Co. of Chicago and the Carrier Corp. located in Syracuse, N. Y.

**C. J. Inspection Service
Formed by Camp, Jump**

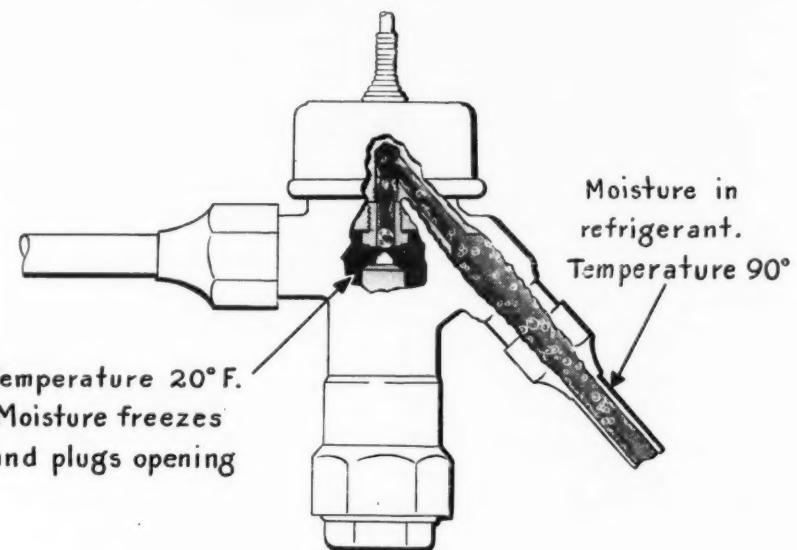
DETROIT—Offering service in the domestic refrigeration and heating fields, the C. J. Inspection Service has been organized at 11820 Linwood Ave. here by James W. Camp and John Jump. In addition to repair work, the firm announces that it plans to operate a sales organization.

Servicing Commercial Refrigeration Systems

Instalment No. 15

Editor's Note: This is the fifteenth of a series of articles prepared through the cooperation of the service department, Frigidaire Division, General Motors Corp., showing seven simple steps needed to diagnose the four common complaints causing 95% of all commercial service calls.

41—(A) Intermittent Warming Up of Evaporator ("F-12")



Moisture and "F-12" do not mix. The moisture remains in the form of tiny drops of water, and these are carried throughout the system by the refrigerant.

When these drops enter the expansion valve orifice, the sudden temperature reduction changes them to ice and they plug the opening. When the coil warms up, the ice melts and the system resumes operation until another drop freezes in the orifice.

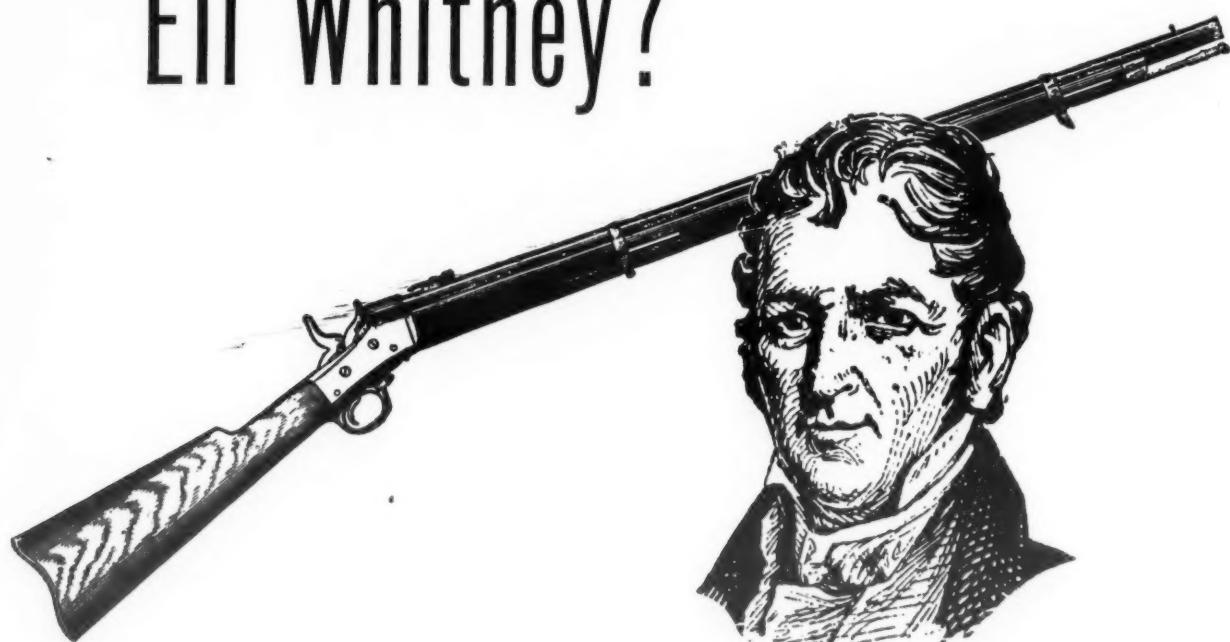
42—(B) Corrosion of Internal Parts

In an SO₂ system, instead of freezing into ice, the moisture mixes with the SO₂ and forms a corrosive acid. This tarnishes internal valve surfaces, pistons, and bearings—and if bad enough, will cause the pistons to stick in the cylinders.

Under certain conditions an acid is also formed in an "F-12" system, but to a lesser degree. This may corrode the expansion valve needle, make it leak, and cause the suction line to frost all the way to the condensing unit.



**Remember
Eli Whitney?**



He used contract manufacturing profitably in 1799

IN March 1799, the United States Government awarded a contract for 10,000 muskets—an unheard of quantity—\$13.40 each—an unbelievably low price—to Eli Whitney.

There wasn't a factory in the country capable of producing such a staggering number of small arms and Mr. Whitney was obliged to post a bond of \$30,000.00 to assure delivery. He did deliver by contracting to have parts made for him—parts so accurate that they would fit together if picked at random. Those guns defended our young democracy in the War of 1812. That is history. So is the dramatic produc-

tion record made by means of contract manufacturing during World War II.

Today's war is an economic war—a race to give the consuming public the goods they so urgently need. Today, as in 1799, the answer to many production and marketing problems is contract manufacturing.

Hupp is an experienced contract manufacturer. With plants in Cleveland and Detroit, Hupp provides men, machines and management, and can do a comprehensive job of engineering, tooling and manufacturing of your part, sub-assembly

or complete unit on a high production, efficient cost basis.

Hupp is currently serving many of the nation's outstanding industrial firms in several industries. If your production or marketing problems involve stampings, machined parts, welding, painting, assembly, then Hupp can be of service to you.

Call HUPP—AN EXPERIENCED CONTRACT MANUFACTURER.



ROTARY SEAL REPLACEMENT UNITS for Refrigerator Compressors

- SIMPLE IN CONSTRUCTION
- SIMPLE IN INSTALLATION
- SIMPLE IN OPERATION

**Available for Over 752 Models
of Refrigerating Assemblies.**



ROTARY SEAL COMPANY
2020 N. LARRABEE ST., CHICAGO 14, ILL.
Canadian Office: 382 Victoria Ave., Montreal 6, Canada

Revision of New York City's Refrigeration Code Permits Use of 'Freon-21', '22', and '113'

NEW YORK CITY—Regulations governing the use of "Freon" refrigerants here have been altered by the New York Fire Department to permit the use of "Freon-21," "Freon-22," and "Freon 113." Heretofore only "F-11," "F-12," and "F-114" were permitted.

These changes became effective recently with the issuance of Circular No. 2 by Frank J. Quayle, New York fire commissioner.

Numerous restrictions regarding applications of these refrigerants still apply, however. Although the circular states the six refrigerants mentioned are "non-flammable and non-irritant," the Fire Department rules that "when used in a room or rooms in which there is an open flame or apparatus to produce an open flame, then the provisions of said article covering irritant refrigerants shall apply."

The ruling also requires that "systems containing more than six (6) lbs. of F-21 or F-113 be confined to separate machinery rooms in accordance with Section C19-99a, Administrative Code."

Among other important sections of Circular No. 2 are the following:

"2. That refrigerating systems employing F-11; F-12; F-21; F-22; F-113; or F-114 are restricted to parts of a building so specified in Section C19-98.0 (b) for refrigerants other than non-irritant and non-flammable.

Direct Method Restrictions

"3. That refrigerating systems employing F-11; F-12; F-21; F-22; F-113; or F-114 used for air conditioning are restricted to the indirect method except that the direct method may be used in parts of a building so specified in Section C19-98.0 (b) for refrigerants other than non-irritant and non-flammable.

"4. That refrigerating systems employing F-11; F-12; F-21; F-22; F-113; or F-114 shall not be installed or maintained in or on the stairways, halls, lobbies, entrances, exits, or auditoriums of any building.

"5. That refrigerating systems employing F-11; F-12; F-21; F-22; F-113; or F-114 shall not be installed or maintained in a hospital, unless the entire system is confined in a fireproof machinery room, used for no other purpose, and in which no open flame and/or apparatus to produce such open flame shall be employed, except that the Class 'C' system containing

not more than 10 pounds of F-11; F-12; F-22; F-114, or not more than 6 pounds of F-21 or F-113 may be used in a diet kitchen which shall be cut off from the rest of the building by a tight fitting self-closing door or doors, and provided with a window or windows to the outside air. All open flames and/or apparatus for producing an open flame, in diet kitchens where these refrigerants are used shall be vented to the outside air as hereinafter required in Paragraph 8.

"6. That refrigerating systems employing F-11; F-12; F-21; F-22; F-113; or F-114 may be installed or maintained in a hospital private room, having tight partitions and tight fitting self-closing door or doors and where not more than two persons are helpless and/or given medical treatment, provided there is no open flame and/or apparatus for producing an open flame in such room and when the system contains not more than 10 pounds of F-11; F-12; F-22; F-114; or not more than 6 pounds of F-21 or F-113.

Fireproof for Theater Use

"7. That a refrigerating system employing F-11; F-12; F-21; F-22; F-113; or F-114 shall not be installed or maintained in a theater and/or motion picture theater unless the entire system is confined in a fireproof machinery room, used for no other purpose, and in which no open flame and/or apparatus to produce such open flame shall be employed, except that Class 'C' systems containing not more than 10 pounds of F-11; F-12; F-22; F-114; or not more than 6 pounds of F-21 or F-113 may be installed in a rest room, smoking room, or lounging room, provided, in such rooms no open flame or apparatus to produce such open flame shall be employed.

"8. That a refrigerating system employing F-11; F-12; F-21; F-22; F-113; or F-114 when used in a room or rooms in which there is an open flame or apparatus to produce such open flame, such open flame and/or apparatus shall be provided with a hood and independent mechanical ventilation so arranged as to convey all the products of combustion to the outside of the building. This provision shall apply only to diet kitchens of hospitals and to Class 'C' systems in schools, churches, dance halls, court rooms, police stations, jails, asylums, subways, passenger

depots, rooms opening into passenger depots and/or subways and such other places as are deemed by the Fire Commissioner necessary in the interest of public safety.

"9. That, except for Class 'C' systems located in rooms in which no open flame or apparatus to produce such flame shall be employed containing not more than 10 pounds of refrigerant each refrigerating machinery room in any building in which F-11; F-12; F-21; F-22; F-113; or F-114 is used, shall be maintained vapor-tight and provided with tight-fitting, self-closing doors, in accordance with Section C19-99.0 (a).

"10. That each refrigerating machinery room in which F-11; F-12; F-21; F-22; F-113; or F-114 is used, shall be adequately ventilated directly to the outside air in accordance with Section C19-99.0 (b) 1, 2, 3, 4.

"12. That the size of pressure relief valves for systems in which F-11; F-12; F-21; F-22; F-113; or F-114 is employed, shall be as follows:

Capacity of System	Number Required
Up to 30 tons	One $\frac{1}{2}$ inch
30 to 60 "	One $\frac{3}{4}$ "
60 to 100 "	One 1 "
100 to 175 "	One $1\frac{1}{4}$ inches
175 to 250 "	One $1\frac{1}{2}$ "
250 to 450 "	One 2 "
450 to 900 "	Two 2 "

125 Attend 2-Day Denver Session of Midwest REWA

DENVER—Two-day meeting of the Midwest Refrigeration Equipment Wholesalers Association here recently was attended by 125 wholesalers and manufacturers' representatives, reports E. L. Bengston, secretary-treasurer of the group.

The wholesalers held a closed meeting the morning of June 7 which was followed by an open meeting with manufacturers' representatives in the afternoon. An evening banquet featured J. S. Kimmel of the Republic Electric Co., Davenport, Iowa, as the main speaker.

On Saturday, June 8, the wholesalers toured the McCombs Refrigeration Co. and the Gates Rubber Co., topping off the meeting with a trip to Mt. Evans.

Gen. Mills Names Distributor

ST. PAUL—New distributor here for the General Mills line of small appliances is the Thermal Co., announces H. W. Small, president. The firm, which expects to be able to start limited-quantity deliveries within the next month, will eventually handle pressure cookers, irons, toasters, waffle irons, and mixers, in addition to its other wholesale lines of equipment, supplies, controls, and parts.

Savannah Dealership Opens

SAVANNAH, Ga.—Longwater Appliance Co. has just opened for business at 144 Barnard St. here.

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928

Your letterhead will bring our latest catalog—also our House Organ,
"The Liquid Line"
RS
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

KRACK
ENGINEERED
UNIT COOLERS
FIN COILS
AIR CONDITIONING
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

ASF SUPERIOR VALVE & FITTINGS COMPANY
Pittsburgh 26, Pennsylvania

VALVES, FITTINGS & ACCESSORIES
For All
• Refrigeration
and
• Air Conditioning
Systems

NUMBER ONE... ON ELPECO'S HIT PARADE!

THE UNITRON



Another Star Billing
By Elpeco Wholesalers

Applauded by service engineers wherever it has been used, the Unitron is definitely the successor to the unit cooler.

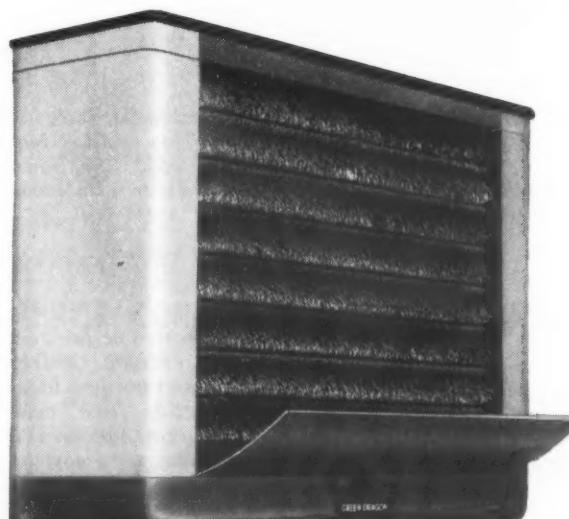
Stardom in the low-side equipment field has been awarded the Unitron on the basis of design, performance, ease of installation, and high efficiency.

Unitrons are available in most models NOW—from your Elpeco wholesaler. There is only one Unitron. Ask for it by name.

ELECTRIC POWER EQUIPMENT CORP.

SHUNK STREET, EAST OF FRONT
PHILADELPHIA 48, PA.

DEWEY 4-2224



Flush mounted to ceiling, of course. Elpeco Thermek surface, of course. Easily removable case of sturdy, rust-proof aluminum. Scientifically brazed return-bends. Adjustable louvre. One piece, deep drawn, drain pan insulated with MICARUB. New color harmony for beauty. A star on every count.

THE GREEN DRAGON

★ CONDENSOTRONS
★ CUBEOTRONS

★ UNITRONS
★ EXOTRONS
★ ELPECO THERMEK
★ GALAXY OF STARS
★ THERMOTRONS
★ CAPACITRONS

THAWZONE
PATENTED
The PIONEER FLUID DEHYDRANT

TRACE
REFRIGERANT
LEAK DETECTOR

**TWO PRODUCTS
WITH
PARALLEL
PURPOSES!**

...to watch over
refrigerating systems
so that the height of
efficiency is steadily
maintained.

HIGHSIDE CHEMICALS CO.
195 VERONA AVE.
NEWARK 4, N. J.

**Coombs Will Represent Architects' Trade Catalog
Lehigh Refrigeration**



C. B. COOMBS, JR.

LANCASTER, Pa.—C. B. Coombs, Jr. is now representing the Refrigeration Division of Lehigh Foundries, Inc. in the New England area.

Mr. Coombs has had 10 years in refrigeration, having worked for York Corp. and York branches.

SYRACUSE, N. Y.—Intended for use by architects and consulting engineers, a 12-page catalog of Carrier Corp.'s air conditioning, refrigerating, and unit heating equipment has just been published, it is announced by Margaret Ingels, Carrier engineering editor.

In a foreword to the catalog, Carrier points out that "Today, more than ever before, air conditioning is an integrated part of progressive architecture and design." The company says air conditioning now is firmly established as a "must" in industry and predicts rapid expansion in its civilian use.

Twenty types of products are pictured and described in the catalog, which is a duplicate of the Carrier insert in Sweet's Architectural File for 1946.

**Kramer-Trenton to Shut Down
Plant July 1-7 for Vacation**

TRENTON, N. J.—Vacation period for the Kramer-Trenton factory has been set for July 1-7. During the entire week the firm, a manufacturer of heat transfer equipment, will close down its plant, according to an announcement of the company.

THERMOBANK EVAPORATOR
IN FREEZER ROOM OF A
PACKING PLANT

THERMOBANK

...REQUIRES NO ATTENTION

Defrosting is completely automatic and on a time schedule. No hand valves need be opened or closed; no coils need be scraped; no goods need be removed.

...MAINTAINS PEAK EFFICIENCY

Never loaded with frost, coils operate at peak efficiency always. Power is saved. Temperature fluctuations are minimized.

How it works



The Thermobank system consists essentially of a forced convection cooling unit, time controls and a heat reservoir. A portion of the heat extracted during the refrigeration cycle, is "banked" in the reservoir from which it is released to the refrigerant during the defrost cycle.

Send for Bulletin TV345-N

KRAMER-TRENTON CO.

HEAT TRANSFER EQUIPMENT

TRENTON 5 • NEW JERSEY

**Refrigeration Problems
And Their Solution**

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

**System Using Capillary Tube with Temperature Control
(Bulb on Evaporator)**

Symptoms

CONDENSING UNIT RUNS TOO LONG OR CONTINUOUSLY.

Evaporator defrosted, only partially frosted or not cold enough. Refrigerator not cold enough. Suction line warm. Suction and discharge pressures low.

Possible Causes

System low on charge.

Strainer, dehydrator receiver valve or fitting in liquid line partially stopped; liquid line kinked.

Suction line kinked or too small.

Capillary tube too long or of too small inside diameter.

Capillary tube partially or entirely stopped caused by:

Ice in the capillary.

Dirt, gum or wax in the capillary.

Dirt, lint, scale or other foreign matter in capillary.

Pressure of liquid refrigerant entering capillary too low:

Room temperature around air-cooled condenser too low.

Water valve on water-cooled unit set too wide or stuck open.

Excessive pressure drop in liquid line; line too long or too small tubing.

Evaporator too far above condensing unit.

Condensing unit overloaded; excessive heat load.

Excessive discharge pressure. (For causes see under "High pressure cut-out short-cycling".)

Compressor inefficient; suction and/or discharge valves not holding, too much piston head clearance, worn or stuck rings.

Motor running too slowly; low voltage, commutator trouble or badly worn bearings.

Compressor running too slowly; belts slipping.

Evaporator too small.

Fan motor on evaporator stopped or running too slowly; fan slipping on shaft.

Finned evaporator iced up.

Temperature control stuck in closed position; contacts welded together or mechanism defective.

Temperature control set too low.

Temperature control bulb not in good contact with the evaporator.

Capillary tube too short or of too large inside diameter.

Overcharged with refrigerant.

Replace capillary with one having correct restrictive effect.

Remove refrigerant so that evaporator is fully active but refrigerant is superheated in suction line.

Remedy

Find leak, repair it and add refrigerant.

Clean, repair or replace the part causing the stoppage.

Replace suction tubing with larger or run additional suction line.

Replace tube with one of correct restrictive effect.

Defrost and install dehydrator in the liquid line ahead of capillary.

Clean and blow out the capillary, or replace it; install strainer ahead of capillary and if required replace oil and refrigerant.

Clean and blow out capillary or replace it; install felt strainer ahead of capillary.

Heat the room or partially obstruct air flow through condenser.

Readjust, repair or replace water valve.

Run larger tubing or an additional tube for liquid line.

Move unit to higher level or raise discharge pressure at unit.

Reduce heat load or replace condensing unit with a larger one.

Trace cause and make necessary correction.

Trace causes by use of gauges; open and inspect parts if necessary. Repair or replace compressor.

Check voltage at motor; test motor speed. Repair or replace motor.

Test compressor speed; readjust belt tension.

Replace evaporator or if blower type increase fan speed or size.

Replace fuses if blown, test voltage at motor terminals, tighten set screw on fan shaft.

Defrost and reset control to assure defrosting cycle.

Repair or replace contacts or entire control.

Readjust control.

Relocate bulb or attach it more securely to evaporator.

Replace capillary with one having correct restrictive effect.

Remove refrigerant so that evaporator is fully active but refrigerant is superheated in suction line.

FOR ICE CREAM CABINETS - INSTALL A RANCO CONTROL 414

Keeps Cream at Proper Temperature for Economical Handling

Ranco Control KW-414 For
Ice Cream Cabinets

The sturdy construction and accurate operation of a Ranco Refrigeration Control safeguards your customers' perishables under most severe conditions—builds good will for you. See your Ranco Jobber—he'll help you select the right control for the job at hand.

Ranco Inc.

Columbus 1, Ohio



OFF THE CHEST

Save Country from Disaster

Lessard Home Appliances & Electrical Equipment
Sebastopol Ave. at Olive St.
Santa Rosa, Calif.

Editor:
We know of no writer who is so courageous and so awake to what is happening to this country.

You make us feel that we should also do what we can do to save this country from the disaster that is so eminent.

We are, therefore, asking for 100 reprints of "What's the Matter with America" and shall be very glad to pay for the same.

We could use much larger quantities than you will allot due to the paper shortage.

I assure you of my admiration for your stand and hope for your success.

E. H. LESSARD,
Manager

Front Page of Every Newspaper

Alabama School of Trades
Gadsden, Ala.

Editor:
Our refrigeration class has just finished reading the article "What's the Matter with America?" in May 27, 1946 issue of your paper. Every member of the class desires a copy of the article. Twenty copies will be sufficient.

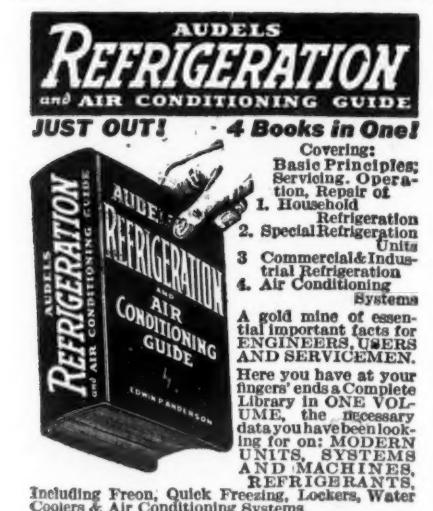
That article should be placed on the front page of every newspaper in the States. We all enjoy the current events and the refrigeration problems and their solutions. The AIR CONDITIONING & REFRIGERATION NEWS is tops with us.

REFRIGERATION CLASS

Directly to the Point

Allen-Bradley Co.
Indiana Terminal Warehouse
Indianapolis 4, Ind.

Editor:
While I am not a subscriber to your Paper, nevertheless I had an



Including: Freon, Quick Freezing, Lockers, Water Coolers & Air Conditioning Systems.

ANSWERS YOUR QUESTIONS.
1280 Pages, 46 Chapters all Fully Illustrated & Indexed for Ready Reference.

4 COMPLETE & PAY ONLY \$1 A MONTH

CUT HERE ————— MAIL ORDER

Please send me postpaid or FREE EXAMINATION books marked (x) below. If I decide to keep them I agree to mail \$1 monthly on each book until I have paid price.

REFRIGERATION & Air Conditioning, 1280 Pgs. \$4.

POWER PLANT ENGINEERS Guide, 1500 Pages. 4.

PUMPS, Hydraulics & Air Compressors, 1658 Pgs. 4.

WELDERS GUIDE, 400 Pages. 1.

BLUE PRINT READING, 416 Pages. 1.

SHEET METAL WORKERS Handy Book, 388 Pgs. 1.

SHEET METAL PATTERN LAYOUTS, 1100 Pgs. 1.

AIRCRAFT WORKER, 240 Pages. 1.

MATHEMATICS & CALCULATIONS, 700 Pgs. 1.

MACHINISTS Handy Book, 1600 Pages. 1.

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NEWS over a year ago was to get his opinions and facts about up-to-the minute news. We have been following the editorials as well as other columns for a long time here, both before and since the war.

Keep up the good work.
W. K. HAMILTON

Brain Dried Up?

Kerrville, Texas

Editor:
"What's the Matter with America?" is a totally false caption; it should read: "What's the matter with our manufacturers and business men? Is their brain so dried up that they cannot even copy the features of others?"

The unions have given them a marvelous example of organization and leadership, but where is any comparable business organization, where are the business leaders comparable to Lewis, Hillman, Petrillo? Non-existent.

The strangest thing is that business could have the most effective propaganda without cost, by simply dividing present advertisements in two parts, one-half advertising the product and the other half making propaganda. Elementary, My Dear Watson.

If those bozos don't have sufficient intelligence to look out for themselves, let them perish.

GEORGE MCGREGOR

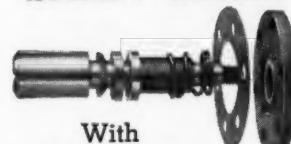
Three
Stores Serving The
Midwest

BUDLOCK
Refrigeration Supply Co. Inc.

EVANSVILLE TERRE HAUTE FORT WAYNE

Specify **CHICAGO**

SHAFT SEALS VALVE PLATES



With
Self-Adjusting
Sleeve Lock.
MODERN
DESIGN



Only Chicago valve
plates have replace-
able seats.

CHICAGO SEAL CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

**Here's a very profitable item
for every distributor and dealer
to PUSH RIGHT NOW!**

**Temprite draught beer coolers
lead the way to HOT volume in HOT weather!**

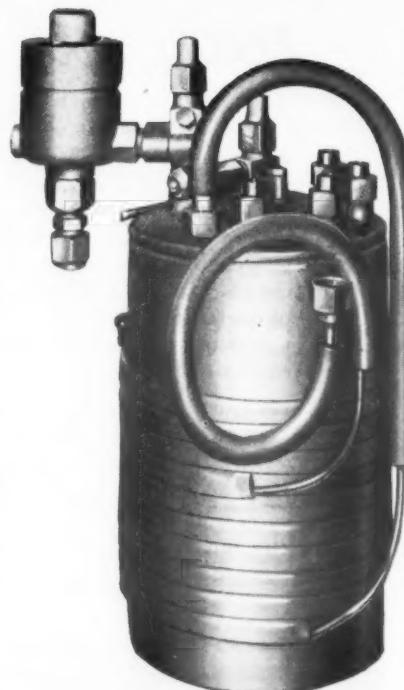
Warm weather boosts tavern beer business but at the same time reduces the efficiency of many existing draft beer refrigeration systems! And any tavern owner, inconvenienced by equipment which cannot properly carry hot weather loads, will naturally consider reconditioning or replacing existing equipment. This is the time to push TEMPRITE draught beer coolers and dispensing units! A TEMPRITE unit will handle hot weather demands to perfection!

TEMPRITE CORRECTS COMMON DRAUGHT BEER TROUBLE

Warm beer, foamy beer, waste beer, unpalatable beer and slow service result in loss of money, and even more important, loss of customers who are dissatisfied. TEMPRITE cooled draught beer is **RIGHT** from the beginning to the end of every keg.

The high refrigerating efficiency, small size and special beer dispensing design make TEMPRITE units ideal for both reconditioning installations (where the condensing unit is available) or complete new installations.

Two different models are available from both the TEMPRITE factory and local wholesale distributors. Write or wire for information on local source of supply and latest literature and prices.



**NOW AVAILABLE
FOR IMMEDIATE
DELIVERY**

TEMPRITE PRODUCTS CORP.

Originators of Instantaneous

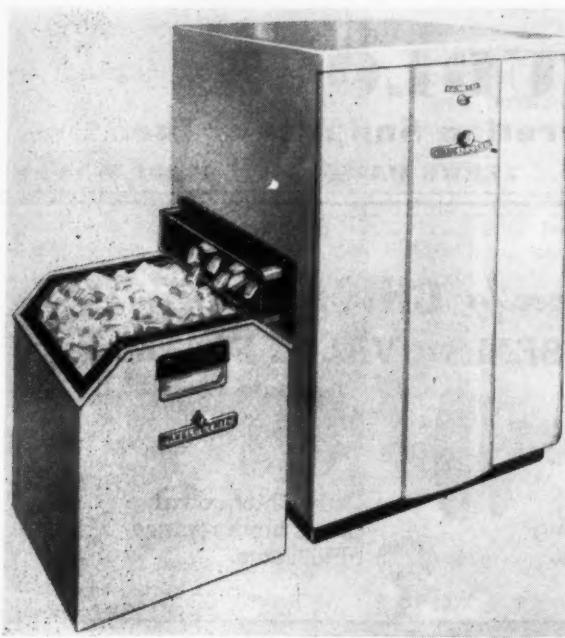
80°-40°

Liquid Cooling Devices

43 PIQUETTE AVENUE

DETROIT 2, MICHIGAN

What's New



At left is Model 40CC ice cube maker produced by Panelectric Corp. A commercial model, it is entirely automatic, ejecting its ice cubes into a bin-like container which can hold a maximum of 1,200 cubes. Each time the ice cuber ejects, the unit automatically defrosts itself. Another model (40C) delivers cubes into an inside drawer at the rate of 40 per half hour.

refrigerator, and home freezer unit this year.

Both ice cubers, designated as Models 40C and 40CC, are said to be capable of producing 1,800 ice cubes daily at the rate of 40 every half hour. Model 40C is operated with a push-button control, while the other unit is designed for continuous operation.

Intended for commercial applications, Model 40CC delivers ice cubes

automatically to a bin-like container located beside the unit, which will hold about 1,200 cubes. It is made with either left-side or right-side openings, and can be installed singly or in multiple. In multiple installations a single ice receptacle is placed between two units.

To start the freezing of cubes in Model 40CC, the operator turns the switch to "on" and when enough cubes have been produced, the switch is turned to "ready," the company states. Each time ice cubes are ejected the unit automatically defrosts itself.

This model measures 36 in. high x 22 in. wide x 25 in. deep, but it will be supplied in 35 in. heights, if desired. Standard finish is white enamel, but stainless steel models are available at extra cost. It is powered by a 1/4-hp. hermetic "Freon-12" unit and comes with a 3/8-in. FPT water supply inlet and 1-in. FPT drain outlet.

The other model, 40C, delivers cubes into a storage drawer within the unit. By pressing a button 20 ice cubes are ejected into the drawer, a signal light indicates that the cubes have been ejected. Pressing the button again will drop 20 more cubes into the drawer. This is also indicated by a second light. Both signal lights remain on until 40 more cubes are frozen ready for use, the company says. Freezing requires about 30 minutes. Standard model measures 35 in. high, 22 in. wide, and 25 in. deep, but units are also available in 36 in. heights.

Slated for production later in the year is the Model 20 CFR combination refrigerator, freezer, and ice cuber. Measuring 36 in. high, 54 in. wide, and 25 in. deep, this unit combines 5 cu. ft. of 38° F. storage space, 3 cu. ft. of 0° space for frozen foods, and an automatic ice cuber said to produce 20 cubes in about 30 minutes. Thermostatic controls permit any temperature from zero to 38° in the storage compartments, the company claims.

In addition to its applications in the household field, this model is said to be applicable for commercial installations, including doctors' offices where it can be employed to store biologicals, serums, etc., as well as providing necessary ice.



Appliance Temperature Tester Has 700° Range

NEW HAVEN, Conn.—Capable of measuring temperatures ranging from -100° F. to 600° F., a new appliance temperature tester has been introduced by J-B-T Instruments, Inc. here.

The new tester, known as Model 60-JRT, checks four cold zones and two heat zones simultaneously. By the use of flat leads, the instrument gives continuous readings outside the equipment being checked so that the operator can follow results of adjustments without opening doors, the company claims.

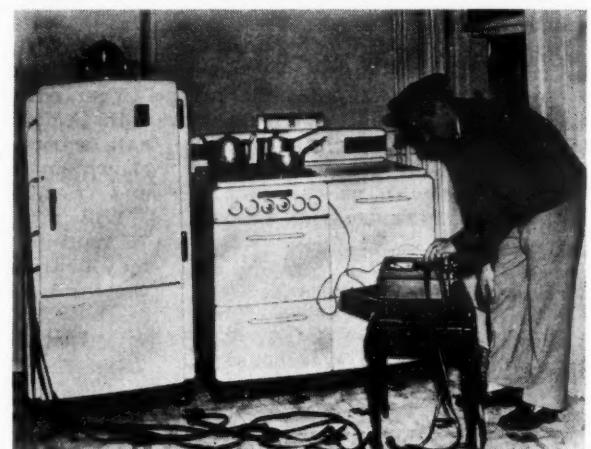
As a resistance thermometer, the tester measures temperatures from -100° F. to 80° F. As a thermocouple millivoltmeter with bridge compensation for ambient temperatures, it measures oven temperatures from 0° F. to 600° F. It also measures

line voltage from 0 to 300 volts A.C. The new device is "a great time saver for service men, factory maintenance men, laboratory technicians, contractors, and maintenance engineers," the manufacturer claims. "It gives accurate readings (plus or minus 2% of full scale) for checking new installation performance and for trouble shooting on quick freeze units, walk-in coolers, refrigerated display cases, water and beverage coolers, air conditioning equipment. And it checks line voltage at the same time."

The heart of this tester, it was explained, is a 6-in. microammeter. After resistance bulbs have been placed for low temperature check, or thermocouples for high temperature check, and leads have been connected to the proper binding posts, the selector switch is set to "Bulb Check." The battery rheostat knob is then turned until the meter reads full scale, showing that the bridge is being supplied with proper voltage by the self-contained flashlight cell. Temperature readings can then be taken for each of the bulbs (thermocouples) by turning the selector switch to the desired bulb or thermocouple marker.

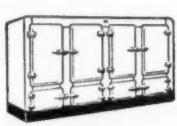
Once set, the meter shows temperature changes as they occur, without further adjustment, according to the manufacturer.

The voltmeter scale and voltmeter leads are provided for checking the supply voltage to the equipment under test. The voltmeter circuit employs a copper oxide rectifier, which gives a linear scale.



At right a demonstrator adjusts the 60-JRT Appliance Temperature Tester, introduced by J-B-T Instruments, Inc. Range of the device is from -100° F. to 600° F.

Planning New Appliances?



Designing New Installations?



ZEROCEL will Save You Money!

If you're looking for a low temperature insulation that will cut costs without cutting quality, here it is! Zerocel is one of the few insulations with ideal properties for practically every type of low temperature construction. And it is so economical you can install it much thicker than ordinary insulations for the same or less money. This reduces your refrigeration (and, of course, the size of your compressor) to the lowest possible minimum, which means big, steady savings in both power and equipment.

Efficient? Zerocel has a thermal conductivity (or "K" factor) of only 0.24 Btu. at 60°F. mean temperature. Dependable? Zerocel is one of the famous Gold Bond Products manufactured by National Gypsum Company and is backed by years of successful installations in the low-temperature field. Sales-clinching Gold Bond Zerocel stickers for appliances and job signs for installations are free on request.

ZEROCEL PROPERTIES:

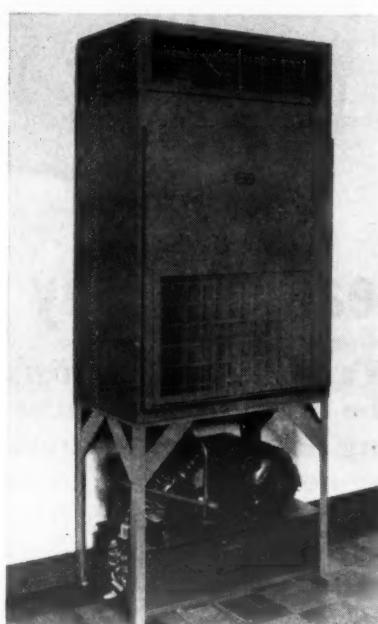
- Completely fireproof
- Immune to fungus, rot decay, and vermin
- Will not absorb moisture or odors
- Light in weight
- Easy to cut with knife

BUILD BETTER WITH
GOLD BOND
ZEROCEL
INSULATION

Zerocel is manufactured to U. S. Dept. of Commerce Standard CS 105-43. Samples and literature on request.

INDUSTRIAL DIVISION, NATIONAL GYPSUM COMPANY
GENERAL OFFICES, BUFFALO 2, NEW YORK

Branch Offices: New York City, Boston, Philadelphia, Washington, D. C., Chicago, St. Louis, Los Angeles, Dallas, Cincinnati, Luckey, Ohio.



'Typhoon' Assembly Used As Unit or Central System

BROOKLYN—The Ice Air Conditioning Co. here has announced the addition of a vertical low-side air conditioning assembly adaptable for use as a central plant or as a unit system to its line of "Typhoon" air conditioning units.

Made with two coil sizes and two sizes of fan motors for units of 3-and-5-ton capacity, the low side assembly can operate with any type of condensing unit, the company states.

The Typhoon low-side assembly comes complete with filters and multi-outlet expansion valve. A removable front panel allows easy access to the filters, expansion valve, coil, motor, and blower, according to the company.

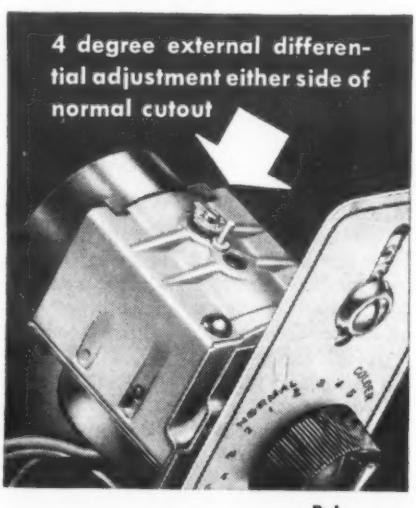
A two-way directional grill fitted to the outlet box at the top of the unit can be removed when the air is to be discharged into a duct system.

The unit is insulated to prevent condensation and loss of refrigeration. In the outlet box the insulating material also acts as a sound absorber. The unit is 35 in. wide, 40 in. deep, and 57 in. high.

FILLING ALL NEEDS

The Cutler-Hammer Line of REFRIGERATION REPLACEMENT CONTROL

This One Universal unit alone covers 60% of all needs.



4 degree external differential adjustment either side of normal cutout

Bul. 9521N9

Adjustable Mounting Brackets

Maximum Mounting Centers..... 4-3/16

Minimum Mounting Centers..... 2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers settings and counter-clockwise raises settings.

Operating knob can be adjusted to meet various evaporator scale settings. New knob is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.



The Cutler-Hammer line of Refrigeration Replacement Control will meet all the refrigeration servicer's requirements. One Cutler-Hammer Control Unit alone... the Universal Replacement unit... will handle 60% of his needs. And where exact replacement control is needed, that item also will be found in the C-H Exact Replacement Control line... individually packed, clearly labelled, complete with dial plate, mounting screws, trim washers and full instructions for mounting and adjustment.

Behind this line are 50 years of control specialization and thorough knowledge of merchandising requirements. Thus, the line is recommended by outstanding refrigeration wholesalers from coast to coast and alert service organizations everywhere use it to reduce investment in stock, to insure regular and rapid turnover, faster completion of the job, and greater all-round satisfaction. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
CH

DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

Trane to Market 'Custom-Air' System, New Chiller, Compressor, Condenser

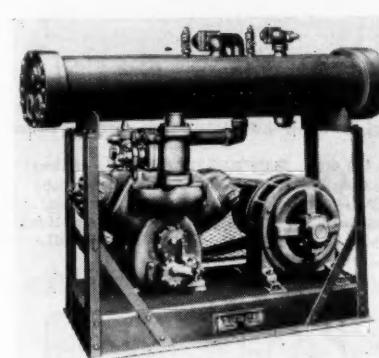
LA CROSSE, Wis.—A new "Custom-Air" system of air conditioning and a new dry expansion chiller, as well as completely redesigned and improved lines of reciprocating compressors and evaporative condensers are being placed on the market by the Trane Co. here.

The air conditioning system, designed for the multi-room, multi-story building, consists of an individual unit in each room space and a separate central system.

The room units recirculate and filter air to offset heat losses or gains. They are self powered units and the amount of heat they provide can be controlled as desired, according to Trane Co.

The central system supplies outside air, humidified or dehumidified, through either a high or low pressure system of duct work. In buildings where space is not a factor, low pressure ducts can be used to save power, the company says. In buildings where space is a decided factor, the smaller high pressure ducts can be used.

For those installations where high pressure duct work is used, Trane has developed an outlet which it claims reduces high pressure air to



A 25-ton condensing unit typical of the new Trane reciprocating compressors.

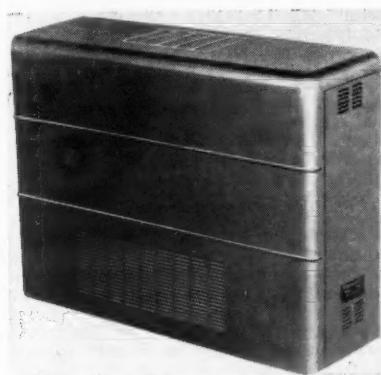
* * *

used to cool other non-corrosive liquids such as brine, denatured alcohol, ethylene glycol, and other fluids having the characteristics of water. They are available for water or brine flow from four to 300 gallons per minute in 3,000 various sizes, according to the manufacturer.

In the line of evaporative condensers, the company enumerated the following improvements:

Headering has been designed to maintain a given velocity in the coil. The coil itself has been changed to bare tube construction. A new solid jet spray nozzle provides better coverage of the coil and gives added capacity.

Brass spray trees are now being used instead of steel. All fan wheels and housings are hot dipped galvanized to combat erosion. For coating exterior and interior surfaces a chlorinated rubber hose material, as developed in the navy, is used.



Trane Air System room unit.

* * *

low pressure and diffuses it to the room without noise.

As the temperature of the air coming from the central system is kept below room temperature, it is possible to heat one room and cool another by adjusting the controls of the room units, the company claims. Even though the central system is out of operation, the room units circulate air and provide heating and cooling.

Thus, when only a few offices need to be air conditioned, the entire system need not be operated, Trane officials say.

In the Trane reciprocating compressor line, force feed lubrication has been incorporated into the units, the company declared. A Cuno filter keeps dirt out of the system. With a minimum amount of oil all parts get an adequate supply. Oil separators are said to be unnecessary.

Trane compressors have only three cylinder bores. Suction and discharge are manifolded into the compressor body so that only a single valve on either side is required, the company explained. Capacities range from three to 100 tons with no duplexing to obtain larger sizes. V and W type construction is used except on smallest sizes to provide maximum capacity in a limited space.

All units with a capacity of 7½ tons or larger are equipped with a mechanism which is said to permit operation of the equipment under partial load with a minimum of cycling.

The 7½ and 10 ton units are available with single step unloaders that unload two cylinders for full and half capacity. Either single or multiple step unloaders are available for larger machines with the single step mechanisms unloading the machine 50% and the multiple step mechanism providing three steps.

The seal of the new compressor consists of a seal coverplate with a stationary sealing surface that is lapped to a truly flat surface. A carbon sealing ring rotates with the shaft and against the flat surface in the coverplate. A simple spring mechanism exerts pressure on the carbon ring to keep it tight against the coverplate thus providing the major seal, it was explained. A neoprene friction ring tight on the crankshaft prevents "Freon" leakage along the shaft.

Trane's new line of dry expansion type chillers provides chilled water for comfort and process air conditioning systems. They can also be

only a number of minor changes were made. The schedules of allowances on used refrigerators as given in the tables of the regulation, have occasioned a great deal of complaints among dealers, because of their low values. Dealers are in the small businessmen's class. Much has been said about trying to help small businessmen remain in business. But the values of RMPR-139 do not fit in with this at all, because they are altogether too low, as any dealer will testify.

"A criterion of your own agency has been to allow justifiable increases where it has had very little, if any, effect on the cost of living. This criterion will certainly apply in the case of RMPR-139, if the recent increases granted to manufacturers

are reflected in a revision of this regulation.

"With very few, if any, major electrical appliances to sell, dealers have been having a terrific struggle to remain in business. Anything that can be done to aid them, even though it is small, will be helpful. So may we again urge your prompt consideration of this matter."

LETTER ON COMMERCIAL INDUSTRIAL REFRIGERATION

"At a meeting of the Board of Directors of this association on June 8 and 9, 1946, it was voted unanimously to urge your agency to remove all price controls on commercial and industrial refrigeration equipment and the installation and maintenance of it."

"Reports to us indicate that present OPA restrictions have resulted in unsatisfactory competitive conditions because of inequities created in the industry and the inability of operators to make a fair mark-up on labor costs.

"Such charges are not significant factors in the cost of living, and the elimination of them will not result in any appreciable impact or hardship on the public."

"On the other hand, their elimination will be of considerable aid to the small businessmen that comprise most of this industry in their efforts to see that this equipment serves its purpose in the packaging, processing, preservation, and transportation of food."

NARC Asks OPA Up Prices On Used Household Boxes, End Commercial Ceilings

CLEVELAND—Petitions for removal of all price controls on the sale, installation, and maintenance of commercial and industrial refrigeration equipment, and for increase in ceilings on used household refrigerators in line with price increases granted manufacturers on repair parts and accessories, have been made to OPA by the National Association of Refrigeration Contractors.

At a recent meeting of the association's board of directors, unanimous approval was voted on sending two letters urging these changes to Paul Porter, OPA administrator.

Emphasizing that increases in the prices of used household refrigerators would have little if any effect on the cost of living, the association's letter pointed out that RMPR-139, the OPA regulation governing used refrigerator prices, has not been revised since July 31, 1945, when only minor changes were made.

"With very few, if any, major electrical appliances to sell, dealers have been having a terrific struggle to remain in business," the letter states. "Anything that can be done to aid them, even though it is small will be helpful."

Regarding price controls on commercial and industrial refrigeration equipment, the contractors association declares that competitive conditions have become unsatisfactory because OPA restrictions have created inequities in the industry and prevented contractors from making a reasonable mark-up on labor costs.

In both letters, the contractors association stresses the fact that household refrigerator dealers and refrigeration contractors are small business men, whom the government is supposed to be helping remain in business.

Text of the letters follows:

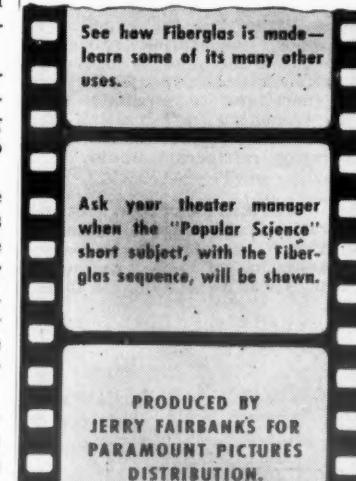
LETTER ON USED HOUSEHOLD REFRIGERATORS

"At a meeting of the Board of Directors of this association, held on June 8 and 9, 1946, it was voted unanimously to urge your agency to amend RMPR-139 to reflect the price increase granted recently to refrigeration manufacturers on repair parts and accessories. It was urged that this be done as speedily as possible.

"RMPR-139 has not been revised since July 31, 1945; and at that time,



CLEAN AIR is part of the picture



In Rockefeller Center or in the Bijou on Main Street, DUST-STOP* Air Filters add to entertainment enjoyment.

Theater managers and executives of commercial establishments of all kinds know, from experience, that clean, filtered air is good for business. Many have learned that, by using DUST-STOPS, filtered air can be obtained at both low initial and low maintenance costs.

And it's good business for you to specify DUST-STOP Air Filter installations. The DUST-STOP is a replaceable-type air filter in which packs of adhesive coated FIBERGLAS fibers provide an efficient medium for catching and holding most atmospheric and manufactured dusts.

DUST-STOP Air Filters, made in a wide range of standard sizes, are adaptable to

the smallest residential or largest commercial heating, ventilating or air-conditioning system. They may be installed in custom-built or the complete, ready-to-assemble, DUST-STOP, steel frame cells. These cells can be built up into filter banks to handle any cfm of air required. Once the filter bank is installed, maintenance is easy and economical—for replacement, DUST-STOPS are readily available from authorized suppliers in nearly every community.

Complete information on DUST-STOP Air Filters will be sent on request. Write for 24-page illustrated booklet—"Air Filtration in Central Systems" (A5.2.1). Owens-Corning Fiberglas Corporation, Dept. 848, Toledo 1, Ohio. Branches in principal cities.

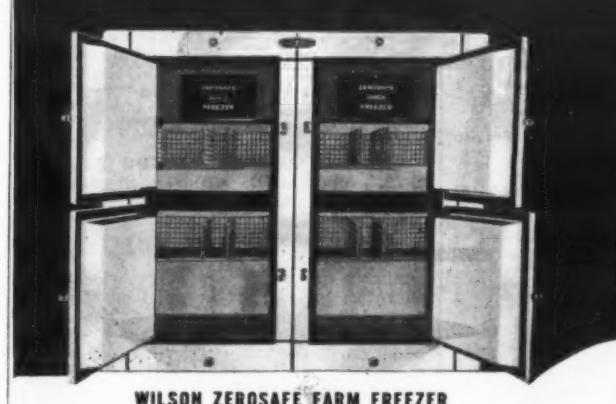
In Canada, Fiberglas Canada Ltd., Oshawa, Ontario.

DUSTOP AIR FILTERS

*T.M. Reg. U.S. Pat. Off.

—a FIBERGLAS product

SINCE 1939... ZEROSAFE by WILSON



THE GREAT NAME IN FREEZER DESIGN

SINCE 1939 Wilson ZEROSAFE has been the greatest reach-in farm freezer in America... THE NEW WILSON ZEROSAFE IS NOW GREATER THAN EVER BEFORE... Not a toy, but big, ruggedly beautiful, efficient, with stamina for years of low-cost operation.

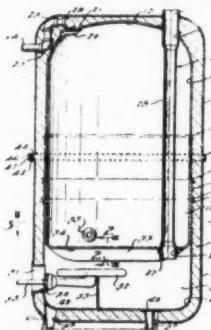
SIZES FOR EVERY NEED
FROM 15 TO 120 CU. FT.

FOR FRANCHISE INFORMATION ADDRESS DEPT. II: WILSON REFRIGERATION, INC., SMYRNA, DELAWARE

PATENTS

Week of May 28
(Continued)

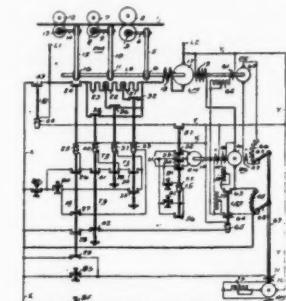
2,401,151. WATER HEATER. Alfred H. Haberstump, Detroit, Mich., assignor to The Murray Corp. of America, Detroit, Mich., a corporation of Delaware. Application Aug. 9, 1943, Serial No. 497,893. 16 Claims. (Cl. 122-156.)



1. In a water heater, a cylindrical tank, a cylindrical pot-shaped element telescoped over and secured to the bottom portion of said tank with the bottoms of the element and tank in spaced relation to form a combustion chamber, and a casing encompassing said tank and element.

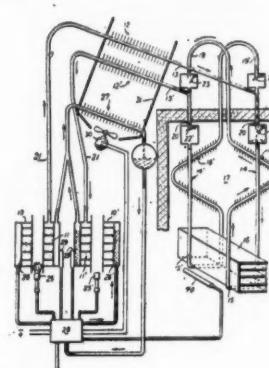
2,401,154. CONTROL SYSTEM. Walter R. Harris, Pittsburgh, Pa., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Sept. 14, 1944, Serial No. 554,079. 9 Claims. (Cl. 172-239.)

9. A control system comprising a direct-current motor having an armature and a field winding, circuit means for supplying direct current of substantially constant voltage to said armature and field winding, an amplifying regulating generator having an armature series connected with



said motor field winding, an adjustable impedance member disposed between said regulating generator armature and shunt field winding, said regulating generator having two oppositely acting and mutually balanceable field windings for separate excitation, means for variably exciting one of said balanceable windings in dependence upon the speed of said motor and means for providing said other balanceable winding with substantially constant excitation.

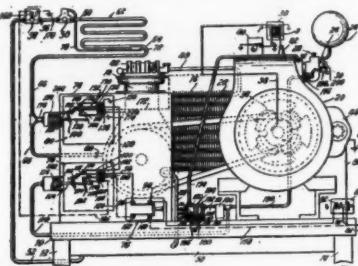
2,401,233. INTERMITTENT ABSORPTION OR ABSORPTION TYPE REFRIGERATION. Nils Erland af Kleen, Stockholm, Sweden, assignor to Kleen Refrigerator, Inc., Hoboken, N. J., a corporation of Delaware. Application July 14, 1942, Serial No. 450,843. 8 Claims. (Cl. 62-5.)



1. In a water heater, a cylindrical tank, a cylindrical pot-shaped element telescoped over and secured to the bottom portion of said tank with the bottoms of the element and tank in spaced relation to form a combustion chamber, and a casing encompassing said tank and element.

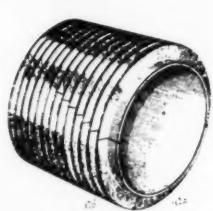
2,401,235. HEAT TRANSFER MEANS. Warren H. Farr, Detroit, Mich., and John P. Tarbox, Philadelphia, Pa., assignors to Budd Wheel Co., Philadelphia, Pa., a corporation of Pennsylvania. Application Nov. 17, 1943, Serial No. 510,800. 1 Claim. (Cl. 257-261.)

1. Refrigerating apparatus comprising an intermittent type absorption refrigerating system having two boiler-absorbers and refrigerant conduit means including condensing means and a plurality of evaporators connecting said boiler-absorbers, heating means for each of said boiler-absorbers, control means for said heating means to heat said boiler-absorbers alternately, and valve means in said conduit means constructed and arranged to interrupt the flow of refrigerant to one of said evaporators during a heating period of one of said boiler-absorbers and interrupt the flow of refrigerant to another one of said evaporators during a heating period of the other one of said boiler-absorbers.

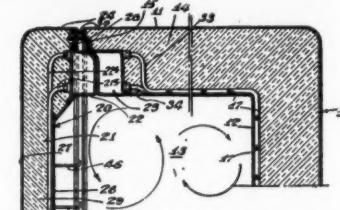


during the other three strokes of the engine from affecting the starter circuit.

2,401,460. REFRIGERATION. Albert H. Charland, Rosemont, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Feb. 25, 1944, Serial No. 523,861. 30 Claims. (Cl. 62-5.)

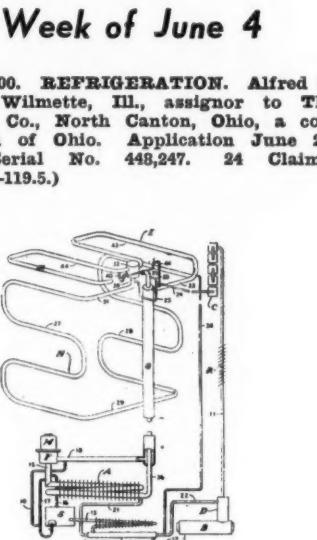


1. A cylinder muff composed of a metal having a high heat conducting capacity composed of a circular strip of a width substantially the same as the axial cylinder length to be occupied by the muff, the strip comprising a base web having a smooth surface on the inside and circumferential fins on the outside, the ends of the fins abutting each other but circumferentially offset from the adjacent fin ends whereby heat exchange reduction due to fin discontinuity along a line through a fin junction parallel to the muff axis is reduced to a minimum.

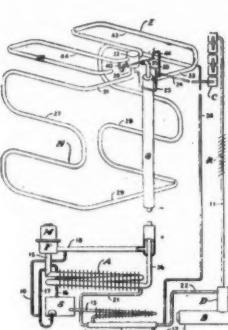


1. In a refrigerator cabinet, a food storage compartment having an open side, self-contained refrigerating means movable into and out of confronting relation with said open side and including a condenser portion and an evaporator portion, and main refrigerating means in said cabinet including an evaporator portion disposed for heat exchange relation with said condenser portion of the self-contained refrigerating means when said means is moved into confronting relation with the open side of said compartment.

2,401,560. REFRIGERATING APPARATUS. Charles D. Graham and Edwin S. Dybvig, Dayton, Ohio, assignors to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Jan. 31, 1944, Serial No. 520,436. 19 Claims. (Cl. 62-129.)

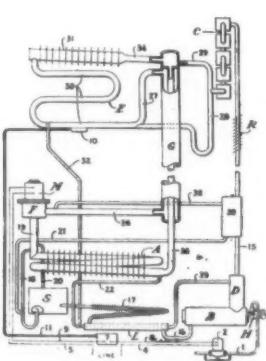


2,401,300. REFRIGERATION. Alfred G. Gross, Wilmette, Ill., assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application June 24, 1942, Serial No. 448,247. 24 Claims. (Cl. 62-119.5.)



1. That improvement in the art of refrigeration which includes the steps of applying heat to a solution of refrigerant in an absorbent to expel refrigerant in vapor phase, liquefying the expelled refrigerant vapor, evaporating refrigerant liquid into the inert gas to produce a primary refrigerating effect and utilizing the inert gas to circulate liquid through a secondary refrigerating zone and in heat transfer relationship with said evaporating refrigerant liquid.

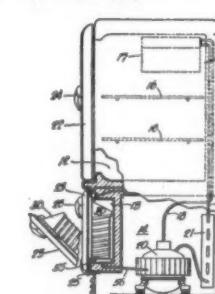
2,401,385. REFRIGERATION. Arnold D. Siedle, Cleveland Heights, Ohio, assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application July 15, 1942, Serial No. 450,975. 15 Claims. (Cl. 62-5.)



1. Absorption refrigerating apparatus comprising a boiler, an evaporator, a liquefier, and an absorber connected to provide for circulation of a plurality of fluids, a fluid circulating device, means for heating said boiler, refrigeration demand responsive means for energizing said circulating device and said heater in response to a demand for refrigeration, means for preventing circulation of fluid through said boiler, and means responsive to a condition produced as an incident to operation of said boiler for rendering said circulation preventing means inoperative.

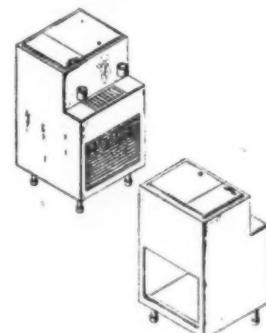
2,401,426. REFRIGERATING APPARATUS. Thomas C. Killoran, Antioch, Ill. Application Aug. 20, 1942, Serial No. 455,415. 14 Claims. (Cl. 62-117.)

1. A refrigerating apparatus including a four-cycle, single cylinder internal combustion engine, an electric starter therefor, a compressor driven by said engine and positioned in a refrigerant circulating system, a starter circuit for conducting electric energy to the starter, means responsive to a reduced pressure in the engine manifold during the intake stroke therefor for breaking and holding open said starter circuit and means for preventing manifold pressures occurring



1. In a refrigerator cabinet, an insulated compartment having an open side, a receptacle movable into and out of said compartment through the open side thereof and provided with its own refrigerating system including a condenser portion and an evaporator portion, and cold-producing means in said cabinet disposed for heat exchange association with said condenser portion of the receptacle refrigerating system when said receptacle is moved into said compartment.

144,931. DESIGN FOR A SOFT DRINK BAR. Albert A. Paley, Kew Gardens, N. Y., assignor to Eagle Automatic Sales Corp., New York, N. Y., a corporation of New York. Application Feb. 20, 1945, Serial No. 118,051. Term of patent 3½ years. (Cl. D2-3.)



The ornamental design for a soft drink bar, as shown.

CLASSIFIED ADVERTISING

POSITIONS WANTED

MANUFACTURER'S REPRESENTATIVE now selling copper tubing to refrigeration jobbers in Iowa, Nebraska, Kansas, Oklahoma, and Western Missouri desires additional items for sale to recognized jobbers. Box 2005, Air Conditioning & Refrigeration News.

EXECUTIVE—Broad experience appliance distribution, fiscal, sales, service management, comprehensive educational background. Locale not a factor. Box 2011, Air Conditioning & Refrigeration News.

PLANT SUPERINTENDENT desires position. 18 years experience in manufacturing commercial and household condensing units and high sides. Familiar with processes, machine shop, inspection, assembly, listing, charging, dehydrating, etc.; also cost, time study, personnel. References upon request as to ability to produce quality product at low cost. Box 2018, Air Conditioning & Refrigeration News.

YOUNG MAN, 28, former U. S. Navy civilian technician, 10 years experience in Commercial Refrigeration and Air Conditioning, seeks permanent position as service manager, field engineer, or assistant to applications engineer. Good technical and educational background. New England preferred but will consider other location. Box 2019, Air Conditioning & Refrigeration News.

COMPETENT ENGINEER with experience past 19 years in air conditioning and refrigeration. Executive with two of major manufacturers stationed here and abroad. Graduate 43 years old. Desire position in southwest preferably. Minimum \$6,000 year. Available July 1. Reply Box 2020, Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVE position wanted. 15 years experience in Commercial Refrigeration Sales and Service. Want permanent position in midwest or western territory. Box 2021, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED: Refrigerator and Radio Field Engineer to call on wholesale distributors for manufacturer of household refrigerators and radios. Must be willing to travel extensively. Requires good technical knowledge and pleasing personality. Previous distributor or factory experience desirable. Write fully giving experience, education, previous salary. Box 2003, Air Conditioning & Refrigeration News.

ASSISTANT SERVICE MANAGER wanted. Excellent opportunity with large manufacturer. Must be familiar with all phases of household refrigerator manufacturer's service department such as correspondence, editing service manuals, supervising parts order department, etc. Radio knowledge desirable but not necessary. Give experience, education, previous salary. Box 2004, Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE MEN: Distributor in Northern Ohio city desires two experienced service men for commercial equipment, locker plants and air conditioning, no Ammonia. Excellent working conditions—hourly rate—overtime—bonus—paid vacation; give experience, age, nationality, and enclose photograph in first letter. Box 2012, Air Conditioning & Refrigeration News.

WANTED—Sales and Application Engineer on lowside equipment in Chicago area. Please state previous experience. Box 2015, Air Conditioning & Refrigeration News.

REFRIGERATION and Air Conditioning Sales Manager wanted by parts and equipment supply jobber, large city middle Atlantic seaboard. Good salary—liberal bonus plan—eventual interest in business for right man. Fine opportunity for man thoroughly experienced and well-connected with manufacturers. All replies strictly confidential. Box 2017, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

"CENTRAZ" Vapor-seal. A flexible waterproof adhesive applied cold that adheres to metal, wood, masonry, etc. For frozen food and ice cream cabinets; milk, beverage and water coolers; walk-in boxes and refrigeration applications requiring vapor-control. Wall applications can be painted. CHRISTY CO., 4464 Duncan Ave., St. Louis 10, Mo.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units 1/4 up to 2 hp. Write for particulars. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

SEALED CROSLEY units with leaky terminals can be repaired by you in a few minutes without opening the compressor. Set of three outside replacement terminals \$6.75 (Part No. 1020). Installation tool \$1.65. Fits all Crosley "F-12" units. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED WESTINGHOUSE units with shorted, leaky, or grounded terminals can be repaired by using our replacement terminals. Set of three \$2.85 (Part No. 1030). Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

ICE CREAM cabinets, 4-6-8-10-12 hole less units. Immediate delivery. Eskimo freezers. WILSON FREEZERS, INC., 837 Tilden St., N.Y.C.

BUSINESS OPPORTUNITY

OLD ESTABLISHED Refrigeration business, good franchise on commercial and domestic refrigeration equipment. Making good profit, owner having to change climate, doctor's orders. Located in good Georgia town, population about 65,000. Will take around \$20,000 to handle. Box 2016, Air Conditioning & Refrigeration News.

JORDON
AMERICA'S MODERN COMMERCIAL LINE
REFRIGERATORS

IT'S NEW!
IT'S Climatic*
SERVICE FREE OPERATION

Jordon Proven Research

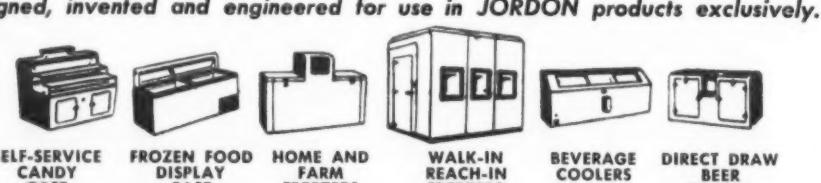
By test the new JORDON coil works under climatic conditions anywhere, North, South, East, West.

Built in equalizer automatically controls proper humidity, temperature and operation.

Effects 25% saving on operating cost.

The climatic conditioning effect in this coil is new in design, operation and theory; makes all other coils old and outmoded.

Designed, invented and engineered for use in JORDON products exclusively.

TEAM UP WITH JORDON
BEST IN DESIGN • BEST IN OPERATION • BEST IN VALUE

SALES DIVISION OF
JORDON REFRIGERATOR COMPANY
235 N. BROAD ST., PHILADELPHIA 7, PA.
RI 6-6359 • CABLE "JORDONREF"
FACTORY . . . PHILADELPHIA, PA.

WRITE NOW

For information on
America's finest
and most complete
line of commer-
cial refrigerators.

Mexican Company's Top Post to White

NEW YORK CITY — John W. White, president of Westinghouse Electric International Co., has been appointed director general of Industria Electrica de Mexico, S. A., which is now building a \$10,000,000 plant near Mexico City for the manufacture of electrical products under Westinghouse licenses.

Mr. White has been associated with Westinghouse for 30 years.

The firm, said to be Mexico's largest privately owned enterprise, was organized to acquire established agencies engaged in the importation and sale of American electrical products in Mexico and to construct the plant.

Refrigerators Obtained By British Ministry For 2 Types of Homes

LONDON, England—Refrigerators, electrical equipment, and stoves are among the structural materials and supplementary supplies now being obtained for builders of temporary houses and prefabricated permanent dwellings by England's Ministry of Supply, according to a press report.

The Ministry of Supply has been authorized to place blanket orders for materials and to bring about certain standardizations to reduce building costs. Orders are placed with private manufacturers and some 20 Government ordnance plants.

Materials are distributed through the Ministry of Works. Some of the other articles affected are hardware, gas fixtures, steel cabinets for bathroom and kitchen, sanitary ware, glazed tiles, and radiators.

It is believed that the plan will expedite construction and result in economies for both manufacturer and consumer. Placing of blanket orders is called a safeguard for the manufacturer who must expand his plant.

Distribution of structural materials and fixtures for other houses and buildings continues through the usual trade channels.

South African Firm to Market U. S. Air Conditioning Equipment

NEW YORK CITY — Arrangements for the marketing of American-made air conditioning units and equipment in his country will be made by the chairman of a South African concern during a visit to this country.

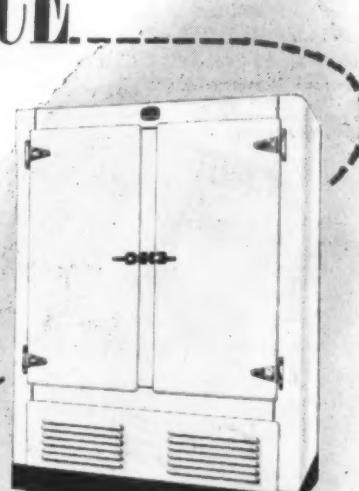
The chairman, Ernest Zehmuller, will make his headquarters with Export Distributors Co. here, purchasing agent for the African firm. Mr. Zehmuller's organization has offices in Cape Town, Johannesburg, Lourenco Marques, Port Elizabeth, and Durban.

Export Distributors said South Africans are "keenly interested" in American air conditioning products.

ASSURED PERFORMANCE in Reach-in Refrigerators

Recognized as quality products SHERER

Reach-in Refrigerators will continue to be built to the same high standards that have earned them their present outstanding position in the industry.



One member of a complete quality line... designed to be salable in volume at a profit.

VEGETABLES • DAIRY CASES • REACH-IN
REFRIGERATORS • WALK-IN COOLING ROOMS •

MEAT & DELICATESSEN DISPLAY CASES •

SHERER
COMMERCIAL REFRIGERATORS
SHERER-GILLET CO., Marshall, Michigan

Bendix Appliances Due in Canada Soon

SOUTH BEND, Ind.—Preliminary to the introduction of its automatic Home Laundry into Canada this fall, Bendix Home Appliances, Inc., announces appointment of Winston V. Howarth, of Brantford, Ontario, as sales and distribution manager for that country.

At the same time, Bendix announced that its new automatic Home Dryer and Home Ironer also will be marketed in Canada. Production of both these appliances is scheduled to begin this summer.

Bendix Export Manager Harlow K. Lyons, who made the announcements, said Mr. Howarth's first assignment will be the selection of four distributors from more than 400 applications. Initial plans call for distributorships in Montreal, Toronto, Vancouver, and Winnipeg, the first new ones to be set up in a foreign country since the war.

Franchised dealers will receive sample machines by Sept. 1, Mr. Lyons disclosed, with the first shipments for customers following soon after.

Bendix contemplates assembling its washers in Canada to meet the demand for machines with 25-cycle motors, according to Mr. Lyons. Meanwhile, he said, machines with 60-cycle motors will be exported.

Prior to the war, several hundred washers were sold in Vancouver and British Columbia through the Hudson Bay Co. and McLennan, McFeeley & Prior, Ltd., Mr. Lyons stated.

REFRIGERATION by CURTIS

Write for complete information.

Bulletins C-14-M, C-58, C-68-C

CURTIS REFRIGERATING MACHINE DIVISION of Curtis Manufacturing Company 1912 Kienlen Avenue • St. Louis 20, Mo.

If you intend to sell Self-contained Air Conditioning Units BY ALL MEANS ORDER 'PRACTICAL AIR CONDITIONING'

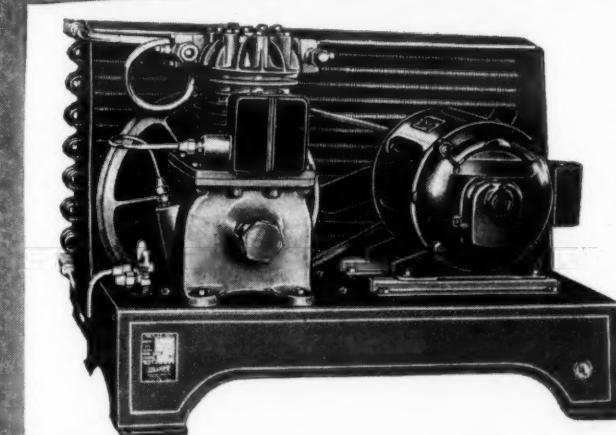
A new and revolutionary method of acquiring the knowledge necessary to determine cooling loads, air and water quantities, design piping and air ducts. Includes an improved calculation form. Price \$5.00 check or money order.

NEXT PRINTING AVAILABLE JULY 15
Shaw Mfg. Co., Box 2201, Beaumont, Texas.

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE 440 LAFAYETTE ST. New York 8, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.



BRUNNER REFRIGERATION HELPS YOU TO SERVE BETTER



When you specify
BRUNNER Condensing Units
...you're buying refrigeration!



When you buy a Brunner Refrigerating Condensing Unit you're buying refrigeration, not merely pounds of metal!

Brunner Refrigerating Condensing Units are designed and built along the lines of a unit that you, with your intimate knowledge of the essential requirements, said you must have. The result is a line of condensing units that reach a new high in the Brunner standard of perfection. Many changes were made to increase an already high efficiency, further reduce existing low operating costs, broaden their applications—while still holding price in line—and never losing sight of Brunner engineering integrity.

Whether your requirements call for a $\frac{1}{4}$ h. p. or 25 h. p. unit, air-cooled or water-cooled, there is a Brunner Condensing Unit designed to meet them.

They are all described and illustrated in the Brunner Refrigerating Equipment Catalog, which also contains valuable engineering data, information and tables. Write for a copy.

BRUNNER

BRUNNER MANUFACTURING CO.
UTICA 1, NEW YORK, U. S. A.

6 Firms Handling Gibson Home Freezers Given OPA Ceiling Prices on 5 Models

GREENVILLE, Mich. — Ceiling prices at the manufacturer, distributor, and dealer levels have been established by OPA for sales of home freezers manufactured by Gibson Refrigerator Co. and marketed through the following six firms:

The Firestone Tire & Rubber Co., Akron, Ohio; Gamble-Skogmo, Inc., Minneapolis; Western Auto Supply Co., Los Angeles; Associated Merchandising Corp., New York City; the Cussins & Fearn Co., Columbus, Ohio; and Goldblatt Bros., Inc., Chicago. Prices on the last two firms are for manufacturer-direct-to-dealer sales and sales to consumers.

Ceilings as established in MPR 591, Order 650 follow:

Manufacturer's Selling Prices

	East	West
Model 5A4	Zone 1	Zone 2
To: The Firestone Tire & Rubber Co., Firestone Park, Akron 17, Ohio:		
Base prices	\$156.00	\$156.00
5-year service protection plan	5.00	5.00
Crating charge	6.00	6.00
	\$167.00	\$167.00

The Firestone Tire & Rubber Co.'s selling prices to their dealers:

	Zone 1	Zone 2
Model 5A4	Zone 1	Zone 2
Base prices	\$250.00	262.00
5-year service protection plan	5.00	5.00
Crating charge	6.00	6.00
	\$261.00	\$273.00

The Firestone Tire & Rubber Co.'s dealer's selling prices to consumers:

	Zone 1	Zone 2
Model 5A4	Zone 1	Zone 2
Base prices	\$325.00	\$337.00
5-year service protection plan	5.00	5.00
Crating charge	6.00	6.00
	\$336.00	\$348.00

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